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CONSUMER BULLETIN

The Original Consumer Information Magazine,
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GARAGE DOOR OPERATORS

1960 AUTOMOBILES

Chevrolet 6 and V-8

Ford 6 and V-8

Plymouth V-8

Studebaker Lark 6

New Ford Anglia

Stereo record players

Artificial sweetening

Washer, dryer, washer-dryer combination

Tests of 3 GE appliances

Rugs and carpets—

a guide to their selection

Electric coffee grinder

Rotary paint sprayer

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Stereo record players

Including

some players

with AM-FM radios

To say that confusion reigns in the field of manufactured stereophonic record players is to state mildly the general situation that now prevails. Over a year ago (see the February 1959 BULLETIN), the manufacturers of ready-made radio-phonograph combinations were attempting to provide a product that met the basic requirements of stereo design. In essence, the stereo phonograph requires two amplifying channels and two distinct speaker systems, which can be placed some distance apart. Usually, the second speaker system is built into a separate cabinet and connected electrically to the main control cabinet with a relatively long extension cord. In this way, the designer achieves the rather wide separation between the two sources of sound reaching the listener's ears that is necessary to give good stereo listening when loud-speakers are used.

The new models which are included in this report generally reflect the many changes in design that were expected and which Consumers' Research predicted in the February 1959 article. Unfortunately, while changes in home appliances are often for the better, it cannot be said that they are in this instance, for many of the new 1960 models are compromises, in that all the necessary equipment is enclosed in one cabinet. True stereo has not yet been achieved by any combination in which the separate speaker systems are fixedly mounted within the confines of a cabinet that is at most 3½ or 4 feet wide. Don't believe advertising that claims that "as you listen, the speakers actually seem to move out beyond the sides of the [4-foot] cabinet." They should be well separated, before you start to listen.

The manufacturers are aware, apparently, of the deficiencies that prevail in most of today's ready-made stereo sets, for the needed separate speaker—and thus much improved stereo capability—is available, in a matching cabinet, for most models of ready-to-use stereo record players. However, this essential feature is provided only at considerable extra cost ($35 to $125). One has to buy extra furniture and a third speaker for his stereo system only when one feels a need for it. It would appear that the manufacturers have found in the past year that most buyers can be satisfied with the cheaper single-cabinet design that is, unfortunately, incapable of providing good stereo sound quality.

Obviously, the manufacturer likes the low-production-cost solution—a way which widens the quality gap between a stereo system properly assembled from separate components and the manufactured ready-to-use assemblies or combinations. With the home-assembled system, you pay only for those components you have need for, *you get much better sound quality*, and you may very likely have more than enough money left over to buy a pleasing cabinet to house the amplifiers and one speaker, if you want one.

If you happen to be one of the many, perhaps the majority, who wish to buy a combination already built, ready for use, you will find the following hints regarding proper interpretation of specifications may be helpful.

Reading the specifications

For many, the first consideration will be the appearance and style of the cabinet. No matter whether your choice is American Provincial in a maple veneer finish, or a Modern design in blond oak, the cabinet *must be solidly built*. Thin, poorly braced wood panels vibrate excessively, may cause cabinet rattles, and generally will result in poor sound quality and unwanted modification of the sound that would otherwise be reproduced by the speaker. It is of interest to note that the quality of the cabinetwork in most of the models tested was good; indeed, it was at a much higher level

(*Continued on page 23*)

The Consumers' Observation Post

WARRANTIES FOR USED AUTOMOBILES reconditioned by dealers for sale were meeting with considerable popularity among consumers last year when they ran into trouble with certain state insurance bureaus. In Maine and Utah, as well as in several other states, the companies underwriting such warranties were held to be in the insurance business and as such were required to qualify legally to do business under the insurance laws. The problem of meeting such requirements was insurmountable in some cases. Automotive Age reports that Consolidated Warranty System, of Springfield, N.J., is apparently being liquidated, with more than 700,000 claims outstanding. The company was considered the largest writer of used-car warranties.

* * *

SWIMMING POOLS are rapidly becoming big business. The National Swimming Pool Institute reported that at the close of 1959 there were some 254,200 in this country and the annual consumption of chemicals for pools is put at something like $52 million. The chemicals most in demand are chlorine, hypochlorites, algaecides, and cleansing compounds, not to overlook paint. Homeowners are reported to spend about $4 a week during the swimming season for hypochlorites, either calcium hypochlorite in powder or tablet form or a solution of sodium hypochlorite. The next big item in the home pool maintenance is an algaecide such as copper sulfate, or the quaternary ammonium-type which is the more popular of the two types. The home pool owner's outlay for algaecides is estimated at something like $12 a season.

* * *

SMALL REFRIGERATORS are increasingly in demand in hunting cabins, seashore homes, recreation rooms, and other spots where there is no need to keep large stocks of food. In this country, few appliance manufacturers attempt to market refrigerators under 8 cubic feet, chiefly because it costs about as much to tool up to make the smaller units as it does the full size. It has not been considered possible to turn out a small refrigerator to retail for a price below $100, according to Home Furnishings Daily, which reports that the European small refrigerator produced so extensively on the Continent may follow the lead of the imported small car now being brought into the U.S. in considerable numbers.

* * *

ROLLING A PERSON WHO HAS CAUGHT FIRE in a blanket or rug to smother the flame is not necessarily considered a good technique, with today's textiles. The National Safety Council has pointed out that blankets and rugs made from certain synthetic fibers that melt or fuse from heat may stick to the skin, causing a serious burn. The Council recommends simply rolling the victim on the floor until the flame is extinguished.

* * *

IF REPAIRS ON ELECTRICAL HOUSEWARES added up to a greater total in 1959 than in any previous year, it is undoubtedly due to the larger number of appliances sold and in use during the past year. That was the view of a number of manufacturers' representatives and branches in California queried by a reporter for Home Furnishings. Consumer neglect or misuse are held responsible for some of the failures. Steam irons are cited as a major example where the homemaker's refusal to use distilled water instead of ordinary tap water and neglecting to store the iron heel down cause trouble. With automatic toasters, using a fork to extract a piece of toast instead of waiting for it to pop up, and the failure of the manual lever for pulling bread slices down into the heating slots are reported to be major causes of repairs. Clear, simple instructions on how to care for and use various electrical household devices correctly and getting consumers to read them are suggested as ways to cut down on repairs.

MANY CONSUMERS IN THE STATE OF WASHINGTON have not fully accepted the use of antibiotics for preserving poultry meat. That was the conclusion of a study made by the Washington Agricultural Experiment Station and published in July 1959. Although they claimed their study indicated that certain consumer reactions were unfounded, the researchers noted that, in spite of government approval, some people disapprove of antibiotic-treated chicken. Among the consumer comments were: "Treated poultry should not be allowed"; "I don't believe in putting preservatives in food"; "Would prefer local fresh if price can be met." We think that the instincts of people who want fresh untreated chickens are sound and that state agencies should heed consumers' wishes in such matters.

* * *

CORRECTION PLEASE: Dr. Charles Pulvertaft, who headed the study of stomach ulcers reported in the March Observation Post, is located in York, England, not New York City.

* * *

THE UNPLEASANT FISHY ODORS FOUND IN GARMENTS, sometimes when they are brand new, sometimes when they have come from the cleaner, are a problem. Actually there is nothing in the dry-cleaning process that causes the unpleasant smell, which is primarily due to a resin finish, either of the urea-formaldehyde or the melamine-formaldehyde type. In a study made by the National Institute of Drycleaning, it was found that the raw materials of these finishes sometimes reacted with each other to produce a fishy odor. If the resin-treated garments are properly finished, no unpleasant odor will develop. The NID reports that dry cleaning will not remove the odor, although wet cleaning, when the garment can be processed in this fashion, is sometimes effective.

* * *

HOW TO TELL THE "GOODIES" FROM THE "BADDIES" in Westerns on television or in the movies used to be simple. The good guys wore white hats and those in black hats were the bad ones. Now, with psychological and "adult" Westerns, things are a little mixed up, but short cuts to characterizations are still in vogue. One TV-radio writer reports that a liquor cabinet with decanters in the foreground and a grand piano in the background indicates that the people living there are rich; a cocktail party at which women are smoking characterizes the group as sophisticated, with the host a publisher, a corporation lawyer, or an advertising executive. A fast woman will wear a tight-fitting gown of shiny material, while a lady will wear a simple dress, a single string of pearls, and perhaps white gloves. A happy husband will be wearing a sleeveless sweater or a shirt with no coat, will be sitting in front of a fireplace, or be smoking a pipe in leisurely fashion, while an unshaven man will have a hangover, be seriously wounded, or will have lost his way in the wilderness. For a delightful new parlor game, figure out your own list of symbols and what they mean while you are watching the current screen.

* * *

TOURISTS ARRIVING ON OCEAN LINERS may soon be able to avoid that tedious wait for customs inspection on the docks. Experiments have been made by customs authorities and steamship companies in the port of New York that can speed up things considerably. The idea is to set up a fast line for passengers with three or fewer pieces of luggage, and no baggage in the hold, who can be ready for inspection quickly. They will be taken care of, and cleared off the pier, while those with a dozen or more pieces are still trying to get their belongings assembled under their letters. Another technique that is being tried out is to arrange for travelers who are bringing in more than their $500 allowance, more liquor than their quota, or who are importing an automobile, to have their duty payments handled on board ship and so save the inspector's time on the pier by eliminating his trip to the cashier's booth with the passenger to make the necessary payment.

(The continuation of this section is on page 37)

Consumer Bulletin

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Listings usually are arranged in alphabetical order by brand name (not in order of merit) under each quality or performance rating. A numeral 1, 2, or 3 at the end of a listing indicates relative price, 1 being low, 3 high. Where the 1, 2, 3 price ratings are given, brands in the 1, or least expensive group, are listed alphabetically, followed by brands in price group 2, also in alphabetical order, etc. A quality judgment is wholly independent of price.

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FEATURES

Rugs and carpets

BUYING A RUG that will look well and give good performance over a long period of time has become a complex problem. No other household textiles are given as severe wear as rugs and carpets, which are expected to be walked on, subjected to dirt and grit, and to remain in place for many years, often without regular and thorough cleaning.

The consumer who is in the market for a rug or carpet will want to take into account a great many factors before deciding on the kind of carpet that will best suit her needs. Size, whether wall-to-wall, room-fit, or room-size, color scheme, and patterned or plain, will be the first considerations. Then, there is the location of the area where the carpet is to be used. A rug in a downstairs hall will receive more wear than one in an upstairs bedroom, for example. A rug in a light, perishable color of a fiber that does not have particularly good wear resistance might be entirely satisfactory in the upstairs bedroom, but would show wear and deteriorate in appearance quickly in the downstairs hall.

The consumer has a better chance of getting a satisfactory carpet for her purpose, and good value for her money, if she will follow some simple steps in arriving at her purchase as recommended by the American Carpet Institute.

(1) Go to a dealer with a good reputation, one whose salesmen will willingly give you the information you ask.

(2) Look for a label with the name of the maker of the carpet and the name of the fiber.

(3) Get the prices per square yard, or per square foot if you prefer, of the carpets you wish to choose from. Don't confuse square foot and square yard prices.

(4) Get all the information you can about the construction of the carpets you like from which you plan to make a selection. Examine the sample for density of the pile and type of backing.

(5) Obtain literature about the carpets, being careful to get instructions on the recommended method of maintenance for the carpets, including how they are to be cleaned.

(6) If you are planning on wall-to-wall carpeting, get the total price, the underlay to be used, whether binding will be required or not. In wall-to-wall carpeting, installation is almost as important as quality of the carpet itself. Be sure the dealer follows the manufacturer's recommendations on laying and binding. A poor installation job can ruin a good carpet.

What will you have to pay?

Rugs classified by the trade as being in the lower-middle to middle price brackets retail at about $5.95 to $7.95 a square yard, and even carpeting of "promotion" grade retails at about $4 a square yard. Unfortunately, long service life is not guaranteed by high price. Styling costs money in rugs as it does in any textile product, and a high-pile but loosely-tufted rug may be high in price, but low in serviceability.

The consumer can, nevertheless, get some idea of the relation of price to wear life from figures which are used as a guide for trade-in allowances and insurance adjustments in the carpet field. The trade bases its so-called "life expectancy" of floor coverings on price, and puts 10 years as the maximum wear life of any domestic carpet or rug on today's market, regardless of price. Orientals are rated as having a life expectancy of 20 years. Carpets selling at $3.95 to $6.95 per square yard are given a life expectancy of three years; those at $7.95 to $9.95, five years; $10.95 to $12.95, seven years; and rugs priced at $13.95 to $20.95 per square yard are estimated to have a life of 10 years.

The price of carpeting depends to a great extent on the cost of the basic fiber. Cotton, acetate, and some rayon rugs are low priced ($3.95 to $5.95 per square yard); some kinds of rayon

Woven rugs can sometimes, but not always, be identified by the consumer from the backing. At the right is a wilton, in the center a velvet weave. At the far right is a wilton, also, but the sponge-rubber backing covers the weave.

(*Super L*) and rayon-wool blends are medium priced ($5.95 to $7.95); acrylic (*Acrilan*), modacrylic (*Verel* and *Dynel*), nylon (including filament-textured nylon like *Caprolan*), nylon-wool blend, and wool rugs are medium to high priced ($7.95 to $20.95). Nylon can also be found in low-priced rugs, but such rugs may be made of waste nylon fibers. Styling, it should be remembered, adds to the price. A rug made of cotton, if "high style," may sell at $18 a square yard.

"Bargains," of course, don't fit into these categories. Rugs of foreign manufacture, from Hong Kong, Japan, and Italy, may be found at low prices, as little as $30 for a 9 x 12 foot wool hooked rug (12 square yards). These rugs usually are sold "as is," and the customer has no recourse then if the colors should fade or bleed, or if the rug falls apart in cleaning. Like any bargain, they are a gamble. A safer bet is a rug of some well-known American manufacturer, which has been reduced for quick sale by an established retailer.

Construction

Woven carpets, such as wilton, axminster, and velvet, which were well known in our grandmothers' day, are rapidly being superseded in popularity by *tufted carpets* made by a process similar to that used for small cotton chenille bath mats. There are no more than five or six American mills which do not offer tufted rugs and carpeting at the present time.

Although originally the equipment used to make tufted carpets was bedspread machines, and the only fiber was cotton, tufted rugs nowadays can be obtained in a wide variety of fibers, with varying pile heights, cut and uncut pile, and in textures that five years back were obtainable only in rugs made on wilton or velvet looms.

One of the early problems of the tufted rugs was the backing material, which has been considerably improved in current output. The use of scrim and double-weight backings are two techniques used, although some manufacturers feel that a jute backing with latex provides sufficient dimensional stability. At least one maker is on record as saying that the use of a scrim backing can make a piece of carpet look and feel better than it really is.

Broadloom is not a type of construction; strictly speaking the term applies to any carpet woven on looms six feet wide or wider.

Regardless of the type of construction, some general rules apply in the selection of durable carpeting. Generally speaking, the closer together the fibers in the pile, the longer the carpet will wear. A carpet with dense pile in which the tufts are set close together will wear better than a carpet with sparse pile in which the tufts are thin and widely spaced. Fold a corner of the carpet back over your finger to see if the backing shows through to a significant extent. It should not.

The type of pile has an effect on the time during which a carpet will maintain its good appearance on the floor. High-and-low-pile, or random-pile, rugs will likely show traffic patterns in use more quickly than even-pile rugs. Then, too, some fibers have more resilience or come-back than others.

Fibers

What fiber will give the best returns for the dollars spent on carpet? It depends in part on the use the carpet will receive. Homemakers are usually well acquainted with cotton and wool fibers and their properties, but there are many manmade fibers in use in rugs and carpets nowadays whose properties are not well established.

The new Textile Fiber Products Identification Act, which went into effect in March 1960, requires that the accepted generic name of the fibers present in textiles must appear on the label. Thus, rolls of carpeting will show the generic name of the fiber or fibers used. The pieces cut from the rolls or pieces of wall-to-wall carpeting, however, need not be labeled. Nevertheless, the consumer should be able to learn without question the fiber or fiber mixture that is used in a particular carpet in which she is interested. The box on page 9 provides some information as to

the characteristics of the different fibers commonly used in carpets today.

Wear characteristics

The relationship between the fiber and the wear characteristics of a rug are not always simple, however. Obviously, construction is an important factor also. Some interesting results were obtained in a study begun by Consumers' Research in 1951 and concluded in 1959, in which rug samples made of various fibers and fiber mixtures were placed in a traffic area and worn "on the floor."

Rugs made of the following fibers were soiled, but not worn through to the backing, at the conclusion of the study.

All wool (two samples)
Wool and rayon blends (four samples)
Acetate and nylon blend (one sample)
Cotton (two samples)

Of these, one of the samples of the all-wool carpet, one having an uncut low pile, was judged to have the most satisfactory appearance at the end of the test. The two cotton carpet samples had the poorest appearance; both were dirty, and matted in appearance. Two rayon-and-wool-blend samples were worn through to the backing.

One year before the conclusion of the service test, two rugs, one made of rayon and one of acetate and wool, had been removed because they had worn through to the backing.

A strip of rug made by the Olson Rug Company, of double-sided construction and reversible, was placed on the floor in the same traffic area in 1956. This rug was turned over, because of excessive wear, in 1959; the reverse side is still presentable in appearance. The purchaser supplies old carpets, rags, and clothing to be used in *Olson* rugs, to which the maker adds an unspecified amount of "new wool." A particular purchaser is not assured, however, that the material she supplied will be used in the carpet she receives from the company. Since the wearing quality of a rug depends in part on the quality of the fibers used, the serviceability obtained from one *Olson* rug is not necessarily a dependable indication of the performance to be had from another.

Quality-control programs

It is wise for the consumer to remember that a single synthetic fiber may be made in several different forms. Nylon, for example, is made in several types. Some of these are suitable for use in carpets, some are not.

The manufacturer of a synthetic fiber, of course, has an interest in seeing that only a suitable type of his fiber is used for carpets and rugs. It is for this reason that at least five of the producers which supply synthetic fibers to the carpet industry have set up quality-control programs to insure the proper use of their fibers in carpeting. Some companies set up minimum weights per yard and specify the kind of backing used in the construction, as well as the character of the fiber.

Among the fiber producers that have established such programs are Allied Chemical, for *Caprolan*, a filament-textured nylon; American Viscose Corp., for Avisco Integrity Tag fibers (rayon); Celanese, for *Celaire*, acetate; Chemstrand Corp., for *Acrilan* (acrylic); and duPont, for nylon. Carpets made under these programs carry a tag or label that identifies the fibers by their trade-marked brand names. A carpet that carries such an identifying label has been made by a manufacturer who has signed an agreement with the company producing the fiber to meet the minimum requirements.

It would appear that the consumer has some guarantee of quality if she buys a carpet which has been made under one of these programs, assuming, of course, that the manufacturer of the fiber is diligent in policing the use of his label or tag.

Tufted rugs have backings that are treated with resin or rubber-like materials to help hold the tufts in place. A backing that cracks when the rug is folded back will likely fail in service. The rug at the left has a coarse jute backing, the one at the right a more closely woven one.

Fibers used in carpets and rugs

Wool
Wool is the traditional fiber for carpets because of its superior properties as a resilient floor covering. It has good to excellent resistance to abrasive wear and excellent flame resistance. Its soil resistance is good to excellent. It is damaged by alkalies.

Nylon
Nylon, in proper constructions, has good to excellent resilience. It has exceptionally good resistance to abrasive wear, and is considered by most carpet manufacturers to be the strongest and longest wearing fiber in the industry; it pills, however (except textured-filament nylon, *Agilon, Caprolan, DuPont 501, Tycora*). It has excellent flame resistance. Soil resistance is good to excellent in delustered fibers, poor to fair in "semi-bright" and poor in "bright" fibers. Nylon is resistant to most acids and solvents.

Wool-nylon blends
The best wool-nylon blends generally are considered to be 80 percent wool with 20% nylon, or 70% wool with 30% nylon. These are resilient, have good to excellent resistance to abrasive wear, and are flame and soil resistant.

Acrylic and modacrylic (Acrilan, Orlon, Creslan, Verel, Dynel)
Acrilan, Orlon, and *Creslan* are true acrylics; *Verel* and *Dynel* are modacrylics. Resilience and abrasive wear, good to excellent, depending on specific fiber (*Dynel* is possibly less resilient; *Verel* may pill). Flame resistance of the true acrylics is questioned; heavier construction and blending with other fibers improves flame resistance. Soil resistance, good to excellent. Resistant to most acids and solvents.

Rayon
Resilience, usually fair to poor, but improves with density of construction. Resistance to abrasive wear, poor to fair. Flame resistance is said to be good if construction is dense. Soil resistance, poor, but fiber is unaffected by normal household acids and solvents.

Cotton
Resilience, poor. Resistance to abrasive wear, excellent. Flame resistance said to be good if construction is dense. Soil resistance, poor, but fiber is unaffected by normal household acids and solvents.

Acetate
Resilience is fair to poor, but improves with greater density of construction. Resistance to abrasive wear, poor to fair. Flame resistance said to be good if construction is dense. Soil resistance, poor to fair, depending on construction. Generally unaffected by normal household acids and solvents, but soluble in concentrated acetone (nail polish remover).

This table is based in part on information in Home Furnishings Daily, November 9, 1959

Carpet cleaning

It is important to consumers to know how long a carpet will wear; they also need to know how well it will clean. As Consumers' Research has pointed out, a carpet which is satisfactory in most respects can become completely unserviceable if it does not clean well.

The matter of cleanability is so important that at least two testing programs have been set up to evaluate rugs and carpets in this respect. The National Institute of Rug Cleaning issues a "Seal of Cleanability" for specific carpets on the basis of performance in three types of tests: cleaning operations on unsoiled samples; performance tests on small samples to determine the effects of wetting, detergents, and spot-removing agents; and a fiber analysis. This program is concerned only with the assessment of damaging changes due to professional cleaning processes and practices, and does not include consideration of the effects of wear, atmospheric damage, fungus, bacterial attack, light fading or possible deteriorating factors, which are not specifically connected with professional cleaning activities. It does not include any assessment of how well the rug or carpet can be *cleaned*, but does determine whether or not it will be damaged by operations likely to be used by good commercial cleaners. Since the program was inaugurated in 1956, a number of carpets have received the NIRC Seal of Cleanability.

Rugs which have received the NIRC Seal of Cleanability

Prices are approximate retail selling prices per square yard.

Aldon Rug Mills, Inc., Lenni Mills, Pa.

Barclay. · $12.95. 70% wool, 30% nylon, velvet plush, cut pile tufted.
Baron. $10.15. 100% nylon, textured loop pile.
Bywood. $12.95. 100% nylon, cut pile tufted frieze twist.
Chesterton. $6.95. 70% wool, 30% nylon, textured loop.
Cosmopolitan. $9.95. 70% *Verel,* 30% wool, textured tufted loop.
Da Vinci. $10.30. 70% wool, 30% nylon, round wire, sculptured effect.
Green Valley. $9.95. 70% *Verel,* 30% wool, tufted high-low loop, random sheared sculptured texture.
Imperial Crown. $9. 70% wool, 30% nylon, textured loop.
Invicta. $9.95. 70% wool, 30% nylon, cut pile twist.
Lancaster. $12.40. 70% wool, 30% nylon, tufted cut pile twist.
Londonaire. 100% wool, tufted high-low loop, high cut pile.
Luxuria. $10.35. 70% wool, 30% nylon, velvet plush, cut pile.
Main Line. $12.95. 70% wool, 30% nylon, heavy plush cut pile tufted.
Park Ridge. $6.95. 70% wool, 30% nylon, textured loop.
Plush de Ville. $17.40. 70% wool, 30% nylon, plush.
Salisbury. 80% wool, 20% nylon, high-low tufted loop.
Springfield. 70% wool, 30% nylon, tufted loop pile.
Squire. $10.15. 100% nylon, textured twist.
Stratford. $10.95. 70% *Verel,* 30% wool, tufted high-low, textured loop.
Vineland. 80% wool, 20% nylon, tufted loop pile.

Also, these now discontinued styles: *Aston Manor, Cavalier, Georgetown, Grandmont, Hearthtone, Imperial Boucle, Imperial Carve, Imperial Plush, Imperial Windsor, Majestic, Miracle Carve, Miracle Plush, Miracle Tex, Miracle Twist, Nyltwist, Pebbletown, Perma Crest, Perma-Point, Perma Tex, Perma Tweed, Royal Weave, Southampton,* and *Tweedtone.*

Cabin Crafts—Needle Tuft Rug Mills, Dalton, Ga.
Loftwist (now discontinued).

Magee Carpet Co., Bloomsburg, Pa.
Argus. $11.95. 100% wool, textured loop wilton.
Brantford. 100% wool, tufted high-low loop.
Cobblestone. $12.95. 100% wool, round wire velvet.
Cranford. $7.95. 100% wool, tufted uniform loop pile.
Crown. $8.95. 100% wool, textured high-low loop pile wilton.
Decade. $8.95. 100% wool, textured high-low loop pile wilton.
Dispatch. 100% wool, high-low loop wilton.
Domain. $17.95. 100% wool, cut pile velvet.
Echelon. $18.95. 70% wool, 30% nylon, high-cut low-loop carved wilton.
Embassy Court. $13.95. 100% wool, cut pile velvet.
Encore. $13.95. 100% wool, cut and loop pile wilton.
Endorse. 100% wool, high-low loop wilton.
Engrave. 100% wool, high cut low loop wilton.
Entree. $11.95. 100% wool, textured loop wilton.
Envoy. $20.95. 70% wool, 30% nylon, plush cut pile velvet.
Espy. $6.95. 100% wool, axminster.
Harbor View. $12.95. 100% *Acrilan,* tufted textured high-low loop and cut pile.
Interlace. $9.95. 100% wool, textured loop interweave.
Interlink. $6.95. 70% rayon, 20% wool, 10% nylon, loop pile velvet.
Jewel. 100% wool, tufted high-low loop high cut.
Kingdom. $15.95. 100% wool, textured loop and cut pile wilton.
New Adherence. $17.50. 100% wool, uniform loop pile velvet.
New Penn Loc. $15.25. 100% wool, velvet round wire loop.
New Penn Loc Bond. $18.95. 100% wool, uniform loop pile velvet.
Nob Hill. $15.95. 100% nylon, velvet.
Overture. $11.95. 70% wool, 30% nylon, textured velvet frieze.
Par. 100% wool cut pile velvet.
Penn Craft. $10.95. 100% wool, textured high-low loop pile velvet.
President. $22.95. 70% wool, 30% nylon, high cut, low loop carved wilton.
Regent. $10.95. 100% *Acrilan,* high-low loop pile wilton.
Royalist. $8.95. 100% wool, cut pile axminster.
Scout. $4.95. 70% carpet rayon, 20% wool, 10% nylon, axminster.
Sky View. $10.95. 100% wool, tufted cut pile.
Sonnet. $11.95. 100% wool axminster.
Twistex. $14 95. 100% wool, velvet.
Vibrant. $19.95. 70% wool, 30% nylon, textured velvet frieze.
Vision. $9.95. 100% wool, tufted textured high-low loop and cut pile.
Also, these now discontinued styles: *Adherence, Bestex, Cathedral, Frosty Valley, Glen View, Lofty Hill, Loom Loc, Mentor, Penn Loc, Penn Loc Bond, Pleasant View, Sound View, Tilford, Translation,* and *Variation.*

Toronto Carpet Mfg. Co., Inc., Toronto, Ont., Canada
Barrymore, Decora. $6.95 to $7.95. 100% rayon, tufted random height loop.

Still another testing program is that offered by Servicemaster, which also has a cleaning system using its own cleaning products. Servicemaster, however, does not make available to consumers the names of carpets which have met their requirements for cleanability. A second article on rugs and carpets includes a discussion of the Servicemaster system.

Consumers' Research cannot urge a consumer too strongly to get all the information she can get about any rug she intends to buy. There are so many brands and so many qualities on the market that any testing program has difficulty keeping up with them. You have a better chance of getting good service, as a general rule, if you buy a rug that carries a well-known brand name. Get as much information as possible about the rug you finally decide to purchase. You, and later on your cleaner, will need it.

* * *

A continuation of this discussion, how to care for your rugs, how to go about getting your rug cleaned satisfactorily, and what to do when things go wrong, will appear in an early forthcoming Consumer Bulletin.

Emendations to Consumer Bulletin

Chevrolet Corvair
Page 8, Col. 2, Dec. '59 Bulletin

The statement that the special kind of heater used in the *Corvair* "can be operated independently of the car's engine" should have read "*cannot* be operated independently of the car's engine." The engine must be running if the heater is to be used, for the fuel-pump that feeds the engine also supplies gasoline to the heater. Thus, as with the more usual hot-water automobile heaters, one may be discouraged from using the heater when the car is parked or standing, because the engine must be running (a standing car with engine running always presents a danger of carbon monoxide poisoning).

The heater runs for a brief time after the engine is shut off to purge unused gasoline from the heater.

Telephoto lenses
Page 18, Feb. '60 Bulletin

The listing of the *Steinheil Quinar f/3.5 135 mm.* lens should be changed to read *Steinheil Auto-Quinar f/2.8 135mm.* Note further that this lens is made in West Germany, not in East Germany.

General Electric laundry appliances

Washing machine
Electric clothes dryer
Washer-dryer combination

CONTRARY to general belief, most home-laundry appliance manufacturers do not change their products significantly from one year to the next with respect to their performance. Any change in an appliance is likely to be related primarily to its appearance, and, of course, in the model number. Because changes of design are frequently negligible, or superficial, Consumers' Research does not conduct annual tests on a number of home appliances that have a high degree of design stability. Such appliances include most makes of washing machines, clothes dryers, and washer-dryer combinations.

The present brief article reports only on several *General Electric* appliances, covered at this time because of certain substantial changes claimed to have been made recently in *GE* laundry appliances, or because the *GE* brand was not tested and reported in certain past BULLETINS*.

Washing machine

The *GE Model WA-1050T* washing machine is in many respects similar to the *Model WA-950S* reported in the May 1959 issue of CONSUMER BULLETIN, but the *WA-1050T* is equipped with a power cut-off switch operated by the lid, and has a brake acting on the spinning tub. When the lid is lifted during the spin, the power to the motor is shut off and the brake will stop the tub almost immediately. On the model previously tested, the tub continued to spin for a minute or more until its rotational momentum was exhausted by the friction of the bearings. The brake is a desirable addition, since it greatly reduces, as some other manufacturers have done, the hazard that someone could be seriously injured while attempting to remove the clothes before the tub comes to rest.

Another addition to the current model is a bleach storage container and bleach dispenser. Approximately three quarts of a liquid bleach (about a month's supply) can be added to the storage container. Thereafter the user can pump an appropriate amount of bleach whenever desired. This device makes it convenient to add the bleach, and avoids the practice of pouring full-strength bleach onto the clothes, a common cause of damage to garments being laundered. The machine automatically delays the addition of the bleach long enough to permit the fluorescent dye (used as an ingredient in the detergent to make the washed clothes look whiter) to become stable on the fabrics and thus be effective in "whitening" the clothes. (Bleach added too soon reduces the effectiveness of the fluorescent dye.)

A. Recommended

General Electric, Model WA-1050T (General Electric Co., Louisville, Ky.) Suggested list price, $380. 27 in. wide, 27 in. deep, 53 in. high, with lid open. Top loading. Effectiveness in washing was good up to a load of 9 lb. Because the washer had no off-balance switch to stop the machine, the drum hit the side of the cabinet when the load was unbalanced, as, for example, when one was washing single items (scatter rugs, etc.). Time required to wash and rinse, 38 min. Cost to wash and rinse a normal load, about 1c plus the cost of 22 gal. of hot water, 10 gal. of cold water, and detergent. The washer was quiet in operation except when it was being filled with water.

Electric clothes dryer

Consumers' Research pointed out in the September 1958 report on clothes dryers that tumbling clothes for long periods of time causes them to wear out faster because of excessive abrasion. Another important consideration in selection of a dryer is the temperature at which the clothes are dried and how high this temperature is likely to go when tumbling continues after the clothes

* Detailed reports with ratings of different laundry appliances can be found in the following issues of CONSUMER BULLETIN: September 1958, Electric clothes dryers; October 1958, Gas clothes dryers; March 1959, Washer-dryer combinations; May 1959, Automatic washing machines.

have become dry. High temperatures accelerate wear of clothes and linens, and, besides, may cause excessive wrinkling of the items dried. Thus, a moderately low temperature (preferably below 175°F) and short total tumbling time (about ½ hour, when the dryer is operated on 230 volts) are the most desirable for minimum wrinkling and longer life of the clothes.

The *GE Model DA-1020T* electric dryer fell short of meeting these two important requirements when set for "automatic." (On this model, an automatic timer control is used for normal drying of the wash instead of a manual timer control.)

The automatic control shuts the dryer off automatically after the clothes have passed the point of dryness (the cut-off is brought about by a steady rise in temperature in the drum after the clothes have become dry). This action is responsible for overdrying the clothes before the machine stops. In favor of the automatic control is the convenience it offers in that it eliminates the need for the operator to estimate temperature and time settings for various loads. Unfortunately, overdrying, particularly when it proceeds at an elevated temperature, increases wrinkling, unless the size of the load dried is reduced greatly.

The *General Electric* dryer incorporates an important safety feature. To avoid accidentally restarting the dryer after a cycle has been interrupted, as by opening of the door, there is a "Safety Start Switch" that must be reset before the dryer will start or resume running. This is a most desirable feature, particularly in homes where there are small children whose ambition it is, sometimes, to climb into a dryer drum. Such a device will eliminate the possibility of their being burned and bruised (a number of children have been killed in this way). The mechanism on the new *GE* dryer has the advantage that it cannot be restarted merely by closing of the dryer door.

B. Intermediate

General Electric Dryer DA-1020T. $320. Vent type. Has "air freshener" and sprinkling system. 230 or 115 volts. 27 in. wide, 27 in. deep, 45 in. high. Drum volume, 5.3 cu. ft. (about average). Replacement of drum light required removal of top of dryer (accomplished from the front by removal of 4 screws). Has safety switch so that dryer cannot be started unless switch is reset (a very desirable feature, particularly where small children may have access to the dryer). Also has magnetic door holder. Air temperature reached in dryer was 185°F at the "Regular" setting, a temperature slightly higher than is desirable; the final temperature was over 200° at the "Heavy" setting. Average time required to dry a normal load, about 45 min., somewhat too long. The automatic timer control of this appliance tends to cause overdrying of the clothes. Cost to dry a normal load with automatic control, about 9c (at 2½c per kwhr. for electricity), somewhat high.

Washer-dryer combination

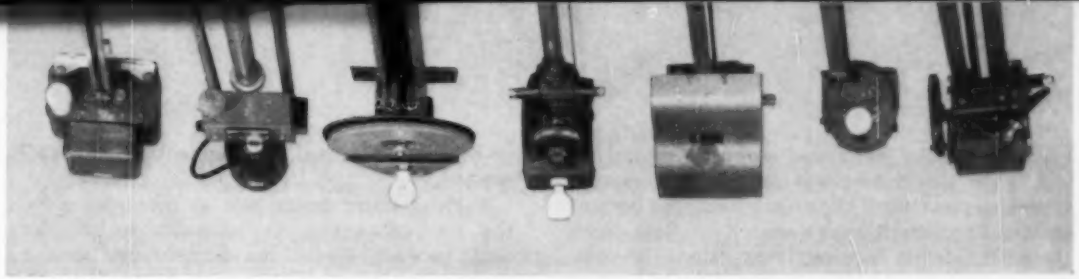
As was pointed out in the March 1959 CONSUMER BULLETIN report on washer-dryer combinations, no major changes have been incorporated in the various combinations in recent years. The *General Electric Model WD-860T* is no exception. In one respect, the current model is superior to its predecessors—namely in its electrical safety characteristics. The present sample passed the electrical safety tests satisfactorily, and exhibited no appreciable leakage current.

In the matter of performance in washing and drying, the new combination differed little from the previous models tested. Its inability to remove as much of the water from the clothes as would be desirable during the spin meant that long periods of drying were required. An average load, for example, took from an hour and 15 minutes to about an hour and 30 minutes to dry. This would mean almost 2 hours to wash and dry a single normal load of clothes.

Running time is also a factor in the cost of operation. Long drying periods increase the consumption of electricity and of cold water. To wash a normal load of clothes and dry it at the regular setting will use about 15 cents worth of electricity to run the combination, plus a supply of about 80 gallons of hot and cold water. (The cost of this amount of water and of heating the water may be estimated at about 10 to 15 cents.)

B–

General Electric, Model WD-860T. $540. 30 in. wide, 26 in. deep, 43 in. high. Drum volume, 4 cu. ft. (small). Front loading. Effectiveness in washing was somewhat below that of the agitator machines, but was good compared to other combinations. Required about 16 gal. hot water and 20 gal. cold water for washing and rinsing plus about 45 gal. cold water for drying a normal load. Drying temperatures were higher than desirable: 160° to 190°F while clothes were wet, up to about 240° when dry on "Regular" setting; 150° to 180° on "Delicate" setting. The machine was quiet in operation. Cost for electricity to operate combination for washing and drying normal load, about 15c, plus cost of hot and cold water, and detergent, somewhat high.



Garage door operators

POWER-OPERATED DEVICES for opening garage doors have been used for many years in commercial installations. In recent years there has been a considerable increase in interest in motor-operated door openers for use in private garages. Indeed, sales have doubled in the past 5 years—about 50,000 units were sold in 1959—and are expected to reach an annual volume of $50,000,000 during the 1960's. At this time, openers are included as part of the built-in equipment in many medium-priced homes in new developments, to provide extra sales appeal.

In essence, a door operator consists of a reversible motor of ¼ to ½ horsepower, connected to a garage door by mechanical means and set into motion by some kind of remote-control switch. The latest models that are now available are rather complicated devices and incorporate various features to provide utmost convenience in operation.

The long-used and simple push-button control is still supplied (and needed) with all models. A key-operated lock-type switch for mounting on a post in one's driveway is also available on some makes. With all makes, too, one can purchase a special radio transmitter which is carried or permanently installed in the car and provides remote control of the door-operator through a companion radio receiving unit mounted within the garage on or near the operating mechanism. Addition of the radio control adds some complication to the switching arrangements. Further complication of the mechanism is brought about by the need for clutches, switches, relays, and other devices to confine door travel within certain limits and provide a safety feature that acts in the event an obstruction is encountered when the door is in motion, or a child or adult inadvertently finds himself caught by the closing door.

Mechanical considerations

Each of the different brands of door openers tested was found capable of opening and closing a door which was purposely unbalanced so that the device had to lift the equivalent of 50 pounds dead weight. All but the *Edco Deluxe* brand, indeed, were found capable of lifting a door requiring a force much greater than 50 pounds.

This is Consumers' Research's first report on garage door operators, devices that are becoming increasingly popular with owners of country and suburban homes. We would appreciate hearing from any subscribers who would be willing to relate their experiences with door openers, those that have proved satisfactory, and those that have caused trouble or needed more than normal amounts of servicing or adjustment.

It should be pointed out, however, that your garage door should be adjusted by the counterbalance springs or torsion spring so that it is well balanced, whether you have a mechanical operator or work the door by hand. With such adjustment, the net force required to move the door may be only 10 to 25 pounds. A possibility always exists with automatic operation that the door may close on the roof or engine hood of your car, or even on an animal or child. With a well-balanced door and a correctly adjusted door operator, the pressure exerted by the door will not be sufficient to cause severe injury or major damage because the driving clutch of the door operator will slip and the motor stop before the squeezing force becomes excessive. However, if the door is poorly balanced, and the clutch plate in the operator is adjusted to give excessive driving force, it is likely that the closing door may cause serious injury or damage. Door balance and clutch adjustment should be checked at least twice a year, preferably in the spring and in late fall, and compensations made for changes in the force required to move the door caused by climatic conditions. The door on a garage, for example, may increase noticeably in weight during that period when the home heating system is regularly in operation.

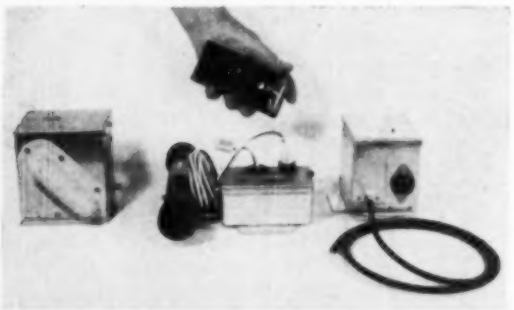
All of the different types of openers tested were designed so that the door would stop at any point in its travel if it met an obstruction. If the object struck was solid—that is, did not "give"—the door continued to exert pressure on the object

even though the motor had stopped. If the object "gave" as pressure was exerted, the door continued to move until the pressure exerted became sufficient to actuate the off-switch or relay. With the safety device incorrectly adjusted, the pressure exerted by the door operator could be considerable, enough to dent the hood of the car or possibly break a person's fingers, an arm, or a leg.

On one operator, the *Crane*, the controls were so designed that the door reversed its direction of motion upon striking an obstacle. On first consideration, this method appears superior to mere stopping of the door motion, because it would release a person rather than hold him. With either method, however, pressure has to be exerted to cause the control to function in stopping or reversing; thus possibly either design could cause about the same degree of damage or injury. There is also the possibility, with the instant-reversal device, that a child's clothing might catch in the door handles or other hardware, and the child be lifted off the ground. Consumers' Research does feel, however, that, if the door does not reverse automatically, it should be possible for the driver of the car to reverse door motion at any point of travel by pushing the button controlling the transmitter.

Each door operator had a built-in light which was switched on automatically when the door was in the open position. On some, a delay-switch mechanism was present (or could be obtained as an accessory), which allowed the light to remain on for ½ to 1 minute after the door closes. This feature is useful at night because it allows one to leave the garage while the light is still burning, without requiring that one turn another light on and off as needed. With each door operator, a separate button was provided for installation in the garage by which the door could be opened and closed, independently of the radio control.

Each operator tested was so constructed that the arm connecting the operator to the door could be disconnected in a moment, and the door could then be opened or shut manually. This provision is a necessary one, for use in the event of a power failure or if one wishes to provide for the door's being opened and closed by hand only. Operation solely by hand might be useful during the summer, for example, when garden tools and the like are kept in the garage and easy and frequent access is important. One should bear in mind, of course, that the open door provides ready access to the push button on the wall which presents an attractive novelty to children playing near by who may enjoy working the door. The possibility of ready operation by hand is also important to take care of the problems that arise if a control requires repair or adjustment, as it may, from time to time.



The four types of transmitters included in the test were the Alliance Genie portable, 27.255 megacycles, at the top (the Magic-Circle portable is similar); from left to right at the bottom: the Barber-Colman, 465 mc.; the Delco-matic, 8000 to 10,000 cycles; and the Multi-Elmac, 27.255 mc., supplied with a number of different brands of operators.

Radio controls

Several different types of radio-control devices were used with the various makes tested. In all, a means was provided to keep phantom operation (uncontrolled operation by another owner's transmitter or other source of radio-frequency energy) at a minimum by the use of different transmitting channels and by "coding" the transmission to the operator in some way. Recently, for example, an unidentified "electronic spook" caused a door opener in a Connecticut home to go up and down each day between 2 and 2:30 P.M. except on Saturdays, Sundays, and holidays. In another instance, in Michigan, an electric can opener was found to be equally effective in opening cans and the garage door and had to be discarded. The type of transmitter most commonly used is contained in a small aluminum box; this is usually mounted in an accessible area under the hood of the car. It requires connection by wires to the ignition switch and car chassis (ground), and is controlled by a simple push button on the dash. On those makes which operate at ultra-high frequencies (about 465 megacycles, just below the beginning of the UHF TV band), the short antenna required is located on the transmitter housing. If the transmitter operates in the Citizens Radio Band (27.255 megacycles), a short length of wire attached to the box serves as an antenna. Either type is easy to install. Portable transistor models working at the 27.255 frequency, however, have a built-in antenna. On low-frequency models, such as the *Delco-matic*, which sends out an electrical signal within the audible frequency range (8000 to 10,000 cycles), the an-

tenna must be installed in a relatively unshielded area beneath or in front of the car.

Only a low-power transmitter is required. Indeed, it appears at this time that there is a definite trend to lower powered transmitters, brought about by the greatly increased use of operators and the possibility that a neighbor on the next block may have a similar kind of transmitter. If he does, he may open or close your garage door as he drives by and presses his dash control to open his own door several hundred feet distant.

Although it's nice to drive right into your garage without stopping, Consumers' Research feels that the short-range (up to 50 or 60 feet) transmitters are adequate and much to be preferred from the standpoint of safety, even though you may have to stop your car for a moment (possibly 5 or 10 seconds) while the door is opening. The operator of any remote-control device should have clearly within view the door he is controlling, so that he can stop or reverse its direction if necessary, should a dog, cat, or possibly a young child wander beneath it at a critical moment.

Tubes or transistors?

In garage-door operator controls, warm-up time is short; the receiver is plugged in at all times, and the transmitter in the car is turned on when one turns on the ignition and will function satisfactorily beginning about 15 seconds later. Thus, while one obtains instantaneous action with a transistor-equipped transmitter, a transmitter that uses vacuum tubes responds quickly enough for all practical purposes.

Commonly used vacuum tubes have a probable expected life of about one year when operated continuously. Transistors should last a good deal longer, but when they do give trouble may be more difficult and expensive to replace. Transistors are more efficient in operation than vacuum tubes and thus provide some economy in operation. However, the 5-tube *Multi-Elmac* receiver used with the *Rado-matic* operator had a continuous current drain comparable to that of a 15-watt light bulb, and current for it if it is used continuously on your house wiring will cost somewhat less than $5 per year. (The use of transistors in the receiver might reduce this cost to about $2.50.)

It is unlikely that a portable transmitter (used with the *Alliance* and *Edco* operators) will be made with vacuum tubes. For such an application, the transistor makes possible a small, compact design, with low battery drain, which is ideal for its intended purpose. The complete transmitter with code signaling device and battery is contained in a leather case, which is only 1 by 2¼ by 5¼ inches in size and weighs only 9 ounces. Yet it has an adequate transmitting range—up to 50 feet from within a closed car. The battery used lists for $1.15 and is said to last for about six months with average use of the door operator.

Federal regulations governing use of door operators

Most of the transmitters and receivers included in the test operated in some part of the radio frequency spectrum which is defined by the F.C.C. (Federal Communications Commission) as between 10 kilocycles and 3,000,000 megacycles. (The transmitter and receiver furnished with the *Delco-matic* operator functions in the audio frequency range 8000 to 10,000 cycles, and thus does not come under the regulations of the F.C.C. governing radio-frequency communications.) For that reason, as low power communication devices, door operator transmitters are subject to certain rules and regulations of the F.C.C. governing their operation and the amount of radiation that that they may emit, as defined in Part 15 of the F.C.C. rules and regulations entitled Incidental and Restricted Radiation Devices.

A transmitter may legally be operated without a license if it complies with the requirements of Part 15. Normally, the manufacturer checks his equipment and attaches a certificate to it. The certificate indicates that the amount of radiation emitted does not exceed certain preselected limits as allowed by the Federal Communications Commission and that less than a certain amount of power is fed to the final radio-amplifier stage. A similar certificate should be present on the receiver if it is one that tunes to a frequency between 30 and 890 megacycles. If the radio equipment you propose to use in conjunction with a garage door operator is not certificated by the

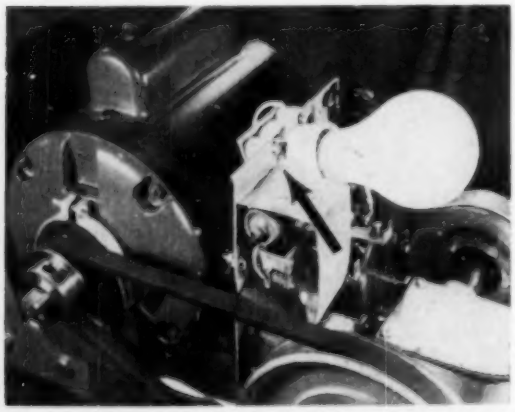
The belt-pulley and chain-sprocket drives of the Vemco operator were not guarded; proper metal guards are needed to prevent a child from inserting a stick (or possibly even a finger) into them.

manufacturer, there is good likelihood that you will have to register it with or obtain a radio station license from the F.C.C.

If the transmitter supplied with the equipment has a power output greater than that allowed for a "restricted radiation device," then an operating license must be obtained from the F.C.C. If the transmitter is included in the type-approved or type-accepted list of the F.C.C., one has merely to fill out and send in the necessary application and await the receipt of his license (the routine may take a month or longer). Generally, a license is not required with a transmitter with limited operating range, such as the portable units supplied with the *Alliance* and *Edco* units. On the other hand, a license will be required with the longer range transmitters used with the *Barber-Colman* and *Rado-matic* operators, both of which are listed in the F.C.C. list of type-approved equipment.

Installation

Consumers' Research found that none of the operators presented problems of installation that the average home craftsman would be likely to find insurmountable, so long as he followed the directions for installation furnished by the manufacturer. Door operators, however, are usually sold and installed by dealers, who in most instances also provide any service that may later be required. None of the drives on the different brands tested are complicated in the strict mechanical sense. The switches, relays, and electronic circuits which are needed to provide remote control are complicated, however, and if you install the unit yourself, and trouble or malfunctioning develops, particularly in the radio receiver or transmitter, you might have considerable difficulty in having a repair or adjustment made by a local electronic "expert" or a radio or TV repairman.



A thin aluminum shield protecting one of the relays in the Edco control was fastened to the base plate at one end by crimping. During the tests, the crimped end of the shield came loose and made contact with one of the electrical connections in the porcelain light-bulb socket at arrow, resulting in a short circuit. A more positive means of fastening is needed.

Clutch adjustment on the Delco-matic is accomplished easily by hand. On several brands, a double-nut locking arrangement is employed which necessitates the use of two wrenches, a more difficult task. With the latter method, too, it is less likely the owner will take the time and trouble to keep the clutch properly adjusted.

On the basis of a limited survey of owners made by Consumers' Research in a Midwestern area, it is generally concluded that garage door operators are reliable devices which are not likely to present serious problems or need frequent servicing (as a good many modern appliances do). In any case, however, you would be well advised to make your purchase from a reliable dealer who has the necessary facilities for repairs and employs service people especially trained for the job.

The prices given include the operator and the radio controls (transmitter and receiver).

A. Recommended

Alliance Genie, Model C-400 (The Alliance Mfg. Co., Alliance, Ohio) $245. Operator only, controlled by a push button, $134.70. Information on average installed cost not available.

The *Genie* is unlike most of the other operators tested in its basic design, in that it uses a long worm-drive screw rather than a chain or a cable to lift the door. It had several desirable features, and its light weight—about 40 lb.—would help to make installation relatively simple. Clutch adjustment, while easy to accomplish, was more critical than on the other makes tested.

Barber-Colman Weather King, Model J (Barber-Colman Co., Rockford, Ill.) $254 list. Operator only, controlled by a push button, $152. Average cost installed, about $220.

The *Weather King* proved satisfactory in operation in

most respects. If purchased for owner-installation, one might experience some difficulty in setting properly the microswitches which control door travel stops. A shock-absorbing device in the operator-to-door linkage arm would be a desirable addition.

Delco-matic, Model T59-12V (Delco Products, Div. of General Motors Corp., Dayton 1, Ohio) $210. Average cost installed, about $240.

The *Delco-matic* is a well-designed and engineered operator with several desirable features. The radio control is unique in that it operates in the audio frequency range and thus should not be subject to phantom or unintended operation caused by other radio services. Servicing facilities are supplied by United Motors Service, a General Motors Corp. subsidiary which has a nationwide organization.

B. Intermediate

Crane, Model OR37 (H. W. Crane Co., 15 N. Ninth Ave., Maywood, Ill.) List price not available. Average cost installed, about $210.

A unit that is mechanically well designed with several good features. Would be worthy of an *A-Recommended* rating if purchased for use in an area where power failures are infrequent or wide fluctuations in line voltage do not prevail.

Edco Deluxe (Electric Door Control, Inc., 7707 Lake St., River Forest, Ill.) List price not available. Average cost installed, about $200. Transmitter and receiver manufactured by A. R. F. Products, Inc., River Forest, Ill.

The *Edco* gave satisfactory operation and was of rugged design mechanically. A shock-absorbing device in the operator-to-door linkage arm would be a desirable addition. The *Edco* would have received an *A-Recommended* rating if the potential electrical hazard illustrated on page 16 had not been present.

Rado-matic Rolo-matic, Model CP-TD-L-RIT (Radomatic Corp., 11815 Williamson Ave., Cleveland 7) $217.50 list. Operator only, controlled by a push button, $127.50. Information on average installed cost, not available.

The *Rado-matic* employs 16 rollers in contact with a long torque-tube drive, a construction that provides quiet operation. The principal criticisms of the design are the lack of a positive clutch adjustment and failure to operate satisfactorily on reduced line voltage. Long-term reliability of operation would also be improved if the switching contacts were better protected against dust. The comparatively heavy weight of the *Rado-matic* would make it one of the more difficult units to handle and install on a do-it-yourself basis. The *Rado-matic* cannot be reversed electrically when the door is stopped by an obstruction.

Vemco, Model 444 (Vemco Products, Inc., 10333 Shoemaker Ave., Detroit 13) $200 list. Operator only, controlled by a push button, $122. Average cost installed, about $230.

The operation of the *Vemco* was entirely satisfactory and the design was rugged. In the opinion of Consumers' Research, however, the belt and chain drives at the motor should be enclosed so that one cannot readily get a finger caught in them accidentally.

Some characteristics of the operators tested

	Alliance	Barber-Colman	Crane	Delco-matic	Edco	Rado-matic	Vemco
Drive mechanism	Screw	Cable	Chain	Cable	Chain	Tube	Chain
Motor speed reduction by	None	Pulley	Worm Gears		Pulley and worm	Pulley	Pulley and sprocket
Electrical overload protection in device	Thermal cutout	Thermal cutout	Thermal cutout	Fuse	None	Special fuse	Fuse
On-Off switch on operator?	Yes	No	No	No	No	Yes	No
Clutch adjustment easily made?	Yes	Yes	Very	Very	Yes	No	Yes
Time delay on light?	No	No	No	No*	Yes	Yes	No
Manual operation easily accomplished?	No	Yes	Yes	Yes	Yes	Yes	Yes
Operation when obstacle is struck							
Door reverses instantly?	No	No	Yes	No	No	No	No
Door stops and can be reversed by driver?	Yes	Yes	No	Yes	Yes	No	Yes
Protection around motor and gears	FG	FG	FG	G	G	G	P
Transmitter certificated?	Yes	Yes	—	***	Yes	—	—
Approximate range, feet	50	250	—	75	50†	—	—
Receiver certificated?	Yes	Yes	—	***	Yes	—	—
Door travel rate, feet per second, 50-lb. load—up	0.6	1.0	0.8	1.0	0.7	0.6	0.8
Door travel rate, feet per second, 50-lb. load—down	0.6	1.1	0.8	1.0	0.7	1.0	0.9
Operation satisfactory at low voltage (100 volts)?	Yes	Yes	No	Yes	Yes	No	Yes
Noise level during operation, relative	Mod.	Low	Mod.	Low	Low	Low	Mod.
Average watts input, running (without light)**	490	310	390	300	290	390	190
Weight of operator, ready to install, pounds	40	46	50	59	58	82	61
UL label?	Yes	No	Yes	No‡	No	No	No

* Available at extra cost.
** Add wattage of light bulb used to figure given.
*** Certificate not required by F.C.C.
† Portable unit (transistor). Car-battery-operated model also available, with greater range.
‡ Yes, if installed by the dealer, and permanently wired into house line. The model tested employed an attachment cord and two-prong plug which does not provide the sure safeguard by grounding that should be present.
G—good; FG—fairly good; Mod.—moderate; P—poor.

Jams, jellies, canned fruits, and the meaning of 'artificially sweetened'

A complex story, but one fraught with considerable importance to consumers; new regulations portend a trend away from clear and informative labeling

WATCH OUT for the phrase "Artificially Sweetened" on cans and jars of various fruits which you will find in grocery stores right now or soon, under the terms of a government order that became effective in June 1959.

The new "standards of identity" set up by the Food and Drug Administration provide for various kinds of "artificially sweetened" canned fruit packed in water solutions of saccharin, sodium saccharin, calcium cyclamate, sodium cyclamate, or any combination of these ingredients. What the new standards do *not* provide are any clear-cut requirements that the labels on these products shall a) reveal the *names and amounts of the sweetening ingredients used*, b) indicate clearly that the sweetener is not sugar or a fruit juice, and c) include the warning that non-nutritive sweeteners should be used *only* by persons who must restrict their intake of ordinary sweets.

The Food and Drug Administration is apparently relying upon certain of its older regulations to control the labeling of "artificially sweetened" products—but the ineffectiveness of these rules in their practical application can be seen by the gradual relaxation of the warnings to be found on the labels. The weaker warnings found today are not necessarily violations, because the Food and Drug Administration rule involved calls for the stricter wording shown in Figure 1 *only* when saccharin or a saccharin salt is used; the regulation was formulated many years ago and has never been brought up to date so as to provide for specific mention of the cyclamates or a general requirement for cautionary labeling about *all* non-nutritive sweeteners (those which have no food calorie values). The Food and Drug Administration concedes that this regulation needs revision to include all non-nutritive sweeteners.

At the same time, that agency indicates the existence of plans to drop the word "must" from the required wording. Whatever new phraseology is proposed, we hope it will make clear that the artificial sweeteners are *not* suitable for general unrestricted use, that they are not a proper substitute for substances having the genuine (though low-quality) food value characteristic of sugar, and that such artificial sweeteners should be employed only by persons who have sound medical reasons for cutting out ordinary sweets, yet find it difficult or impossible to get along without some sort of sweetening substitute.

The failure to require warnings about use of other artificial sweeteners than saccharin or its salts is, in our judgment, a serious defect in the regulation, but an even more serious failing, we believe, is that the entire regulation on label statements relating to non-nutritive constituents applies *only* to food which is claimed to be "for special dietary use." From now on lack of detailed information about the correct names and amounts of sweeteners used can no longer be deemed "misbranding," as it formerly was. If the packer takes care not to claim that the prod-

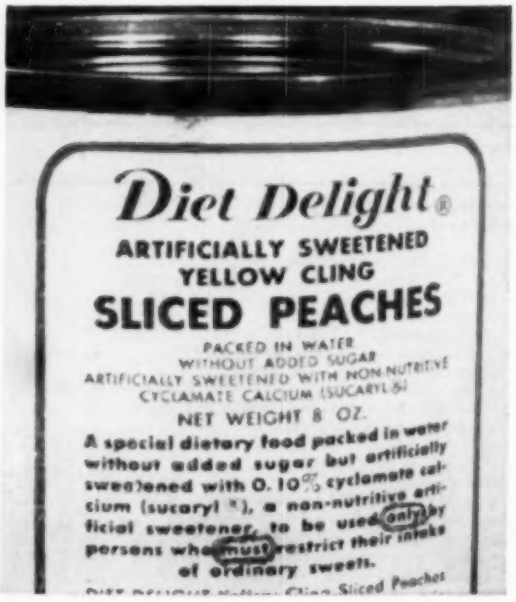


Figure 1—This label on a can of artificially sweetened fruit warns clearly against indiscriminate use of the product. Recently purchased samples bear changed wording at the places we have circled. "Only" is left out and "must" is changed to read "desire to." This change is very important in its effect upon consumers because the newer label does not warn, as its predecessor did, against unrestricted use of synthetic sweeteners by those who have no proper need for them.

uct is for special dietary purposes, he will, as we read the new standards of identity, not need to tell what sweetener is used. The discerning reader of the label will suspect that the sweetener is not sugar, but it is far more important to him to know what it is than what it is not.

Queried about this situation by Consumers' Research, the Food and Drug Administration has taken the view that the mere description of a food as "artificially sweetened" *automatically* "represents" the food as for special dietary use and thereby brings into play the special labeling requirements which apply when such claims are made. We venture to doubt that this interpretation would stand up under attack by a recalcitrant canner who might insist that "artificially sweetened" tells what a product *is*, according to the phraseology established by the government's own standards of identity, and that these words neither state nor imply what the product is *for*, or by whom it is properly to be used.

The Food and Drug Administration apparently does expect that the artificially sweetened foods will be labeled with the names and amounts of their sweetening ingredients. We wonder, therefore, at the peculiarly involved thinking of the agency's regulation writers, who have failed so far to put this simple requirement into simple, straightforward, unequivocal rules which would not seem to invite attempts at evasion and which could be understood by consumers and food packers alike without need for tortuous interpretations. There is no reason why a matter so simple should be expressed in such a complicated way as to require a manufacturer to consult legal advisers to lead him to a correct understanding of his obligations in labeling his product.

The omission of a specific requirement that "artificially sweetened" canned fruits should be labeled to show the names and amounts of the sweeteners used was not an accidental oversight. A provision that would have tended to achieve this result was included in an early proposed version of the regulation, but was *taken out* on the basis of an assertion that the subject was adequately covered by the other regulation we have discussed, about foods that purport or are represented to be for special dietary purposes. Anyone familiar with the legalistic and repetitious propensities of government regulation writers will find laughable the suggestion that a pertinent provision, needed for clarity in a given context, should be omitted simply because it might be considered similar to or a duplication of a provision appearing elsewhere.

As this article is written, "artificially sweetened" jams, jellies, and preserves may also be on their way to supermarkets. Another new regulation, which was scheduled to become effective around February 1, 1960, would establish standards of identity for such products. Until recently, the Food and Drug Administration took the position that sugar was an essential ingredient of jams and jellies, and a manufacturer was required to call any artificially-sweetened jam or jelly "imitation" even though it might be made from pure and wholesome fruit of the type named on the label. The new regulation on jams, jellies, and preserves is defective in exactly the same way as that on canned fruits. It lacks specific requirements for stating the amounts and kinds of sweeteners used, and for a label warning against indiscriminate use.

The Kansas State Board of Health has filed formal objection to the proposed new standards for artificially-sweetened jams, jellies, and preserves, primarily on the ground that the old "imitation" names for these products should be retained. This action in the public interest by Kansas officials, together with objections by others, has resulted in an indefinite delay in the

(*Concluded on page 21*)

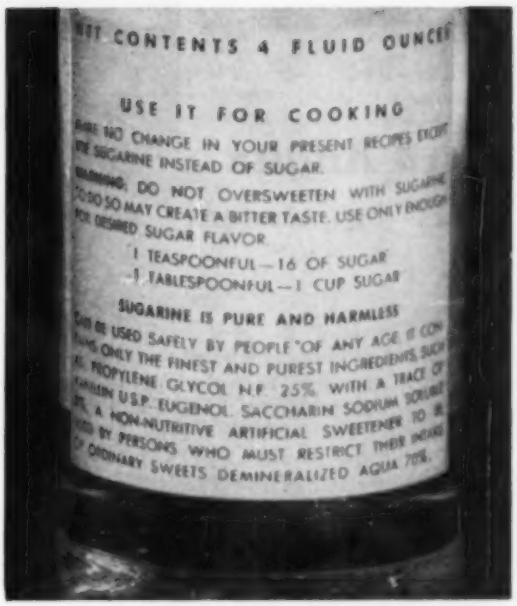


Figure 2—Sometimes reading the label on a food or drug product has real entertainment value, at least for one with sense of humor attuned to the niceties possible in a shrewd choice of words. On the bottle label shown above, the final ingredient listed (at the very bottom of the label), demineralized aqua 70%, is of course merely water (with mineral content reduced). The maker's use of "aqua," which he no doubt hopes may be an unfamiliar term to some and thus the more impressive, is laughable, except to those who may be deceived by it. Not so humorous we think is the weak phrasing of the warning statement, which ought to say, "to be used ONLY by persons who must restrict their intake of ordinary sweets."

Ford Anglia

THE 1960 model of the *Ford Anglia* reflects substantial changes when compared with its predecessor, which for many years was one of the foreign cars that sold in largest numbers in the U.S. When Consumers' Research previously tested the *Ford Prefect*, the car was judged to be about average in many respects (the *Prefect* is a four-door sedan, the *Anglia* is the two-door sedan model), with neither notable advantages nor such distinctiveness in style as would recommend it to buyers looking for something strikingly new or out of the ordinary.

The new *Anglia* is entirely different from the older one in appearance, and in other respects as well. It has a new four-speed transmission coupled to a brand new "over-square" (bore diameter is larger than stroke) engine. The most striking difference, externally, is the use of a rear window with a "reverse slant," which offers the important advantage to owners in the winter that snow and sleet are not likely to collect on it and obstruct the view to the rear. In addition, the new rear window construction provides greater headroom for the rear-seat passengers and some protection from the sun in summer. This effect is achieved by dispensing with the customary shelf behind the rear seat, and the change is definitely for the better, in the judgment of Consumers' Research.

The new four-speed transmission (synchromesh on all speeds except low) is certain to be an improvement over the previously used three-forward-speed unit. With any low horsepower high-speed engine, one has to shift gears often, especially in around-the-town or hilly-country driving, and one will find that, with the low-power engine, four speeds are almost necessary for reasonably easy and satisfactory control of car speed and pulling power under various driving conditions.

The new "over-square," overhead valve engine (3.19 inch bore, 1.91 inch stroke) should enable one to drive at high road speeds without undue wear on the engine. (At rated maximum-engine speed, the piston speed was only about 1600 feet per minute. The engine hood is hinged at the front with an inside-the-car release.

A. Recommended

Ford Anglia (Made in England; distributed in the United States by the Ford Motor Co., Dearborn, Mich.) P.o.e. prices: *Anglia* 2-door sedan, *Standard* and *Deluxe* models, $1442-$1561; *Prefect* 4-door sedan, *Standard* and *Deluxe* models, $1495-$1661; heater $40, white sidewall tires $15, radio $80, are extra accessories.

Riding and handling qualities

The new *Anglia* provides the driver and three passengers with a good ride on good roads at speeds up to 60 miles per hour. On rough roads, the ride was somewhat bouncy. The car cornered well but had some body lean on sharp turns at higher speeds. It was very easy to drive, handle, and maneuver in city traffic, and easy to park. The car handled well in 5 to 6 inches of snow.

Other comments

The brakes provided very satisfactory braking qualities. The output of the heater and the operation of the defroster were both generally satisfactory, although addi-

Ford Anglia specifications and performance data

Engine (and drive)	
Position	Front
Rated horsepower at stated rpm. (997 cc. motor)	39 at 5000†
Cooling system capacity, qt. with heater	6.2
Rpm. at 60 m.p.h.	3750
Transmission, forward speeds (3 are synchronized)	4
Over-all drive ratio, high gear	4.125 to 1
Body and chassis, type	Unit
Wheelbase, in.	90.5
Length, over-all, in.	153.5
Width, over-all, in.	57.3
Turning diameter, ft.	32
Trunk capacity, cu. ft. (about normal for the popular European cars)	11.5*
Tire size	5.20 x 13
Road clearance, in.	6.5
Other details	
Battery	12-volt 38-amp.-hr.
Gasoline tank capacity, gal.	8.5
Touring range on full tank (est.), miles	310
Approximate number of dealers claimed in U.S.	700
Performance data	
Acceleration times, 0-60 m.p.h., through all gears, sec.	37
20-50 m.p.h., 3rd and 4th gear, sec.	23
40-60 m.p.h., 4th gear, sec.	22
Miles per gallon at 50 m.p.h.	37.5
Calculated top speed, m.p.h.	80
Curb weight, lb.	1640

† With 8.9 to 1 compression ratio, takes premium fuel. With 7.5 to 1 compression ratio, takes regular fuel and develops 2 horsepower less (37) at 5000 rpm.

* About normal for the popular European cars; slightly less than on the *Corvair*, only about one half that available on the *Falcon* and *Valiant*.

tional heat output may be desired by some owners at temperatures below about 10°F. Leg room and headroom were adequate in the front; they were somewhat lacking in the rear, although improved when compared with that available in the older model. Visibility to the front and rear was satisfactory; a larger rear-view mirror would be desirable.

The doors are wider than in the old model and allow for easier entrance to the rear seat. The left door can be locked from the outside, the right only from the inside.

Jams, jellies, canned fruits, and the meaning of 'artificially sweetened'

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effective date of the new standards, and there may be changes in the proposed new rules, but the regulations for canned fruit will not be affected by these moves, as they are already in effect.

Pending clarification of the situation, alert consumers will realize that "artificially sweetened" on a product label means that the product has not been made with sugar but with a *synthetic*, nonnutritive, no-calorie material such as saccharin, sodium saccharin, sodium cyclamate, calcium cyclamate, or potassium cyclamate.

The limited use of these sweeteners in reasonable amounts by diabetics and others whose intake of ordinary sweets must be curtailed for medical reasons is no doubt justified—though the simplest and best way to curtail use of sweets is just to stop eating them; many persons who have not been conditioned by many years of consuming excessive amounts of sugar are able to dispense with foods containing sugar without needing an artificial substitute. The artificial sweeteners should *not* be used, however, by anyone who is not *required* to cut down consumption of sugar—and the need for this restriction should be decided only by one's physician, with periodical review by him, not by the government's failure to require proper warnings on the labeling of a box, bottle, or can.

There are two important reasons why ordinary persons in good health should avoid the nonnutritive artificial sweeteners. One is that nonnutritive sweeteners "satisfy" the appetite but will not satisfy the metabolic needs of the body for carbohydrate. The artificial sweeteners are not merely "empty calories," as the term goes, like granulated sugar and refined starches. The synthetic sweeteners are *drugs*, of no food value. *This is especially important for children*, who ordinarily can make effective use of the energy supplied by a normal and not excessive intake of carbohydrates. Also, dietary habits which can follow one through life may be badly distorted by indiscriminate use during childhood of excessive amounts of sugar and artificial sweeteners, which build up the child's idea that sweetness is a normal rather than a quite exceptional taste in the basic foods to which man's digestive apparatus became adapted through eons of prehistoric time. Digestive tracts do not change to meet the new offerings of the supermarket shelves and freezers.

The most important reason for avoiding artificial sweeteners is that their safety, at least that of the cyclamates, is not fully established. As pointed out in our discussion of *Fizzies* and *Nufizz* in the January 1960 BULLETIN, the cyclamates do unfavorably affect the intestinal tract, and medical research to date has established only a *probability* that they do not harm health. (Other sweeteners once considered to be quite safe and harmless were later found to be definitely harmful, and in one case a sugar substitute long supposed to be quite safe was found to have the capacity to produce large liver tumors in rats.) The experts consider that both saccharin and cyclamates "should be subject to continuing observation for possible deleterious effects under prolonged and varying conditions of use." In such circumstances, a healthy person who does not need them would be well advised *not* to use these products.

Another factor in incomplete labeling that is of great importance to some people is the possibility that *sodium*-containing sweeteners may not be so identified for the guidance of those who are or should be on salt-free or low-salt diets. (See the article "Hold that salt!", September 1959 BULLETIN.) Those concerned with this dietary problem should note, incidentally, that so-called "soluble saccharin," identified on many labels by this name only, is properly known chemically as *sodium* saccharin and contains 11 percent sodium. Clear disclosure of this fact on labels should be required, for the benefit of the many persons whose physicians have placed them on low-salt diets.

"Artificially sweetened" is a phrase to be watched for and in general avoided on foods for the family. If the family doctor advises artificially sweetened foods for an individual, choose products on which the kinds and amounts of synthetic sweeteners are clearly labeled and which contain only such sweeteners as the doctor has recommended.

Rotary paint sprayer

THE *Rogers Rotary* paint spray gun with "revolutionary rotary action" definitely is not a wonder device which will solve every painting problem, nor will it allow an inexperienced person, as some of its promoters suggest, to do most common paint jobs with speed, finesse, and "practically no effort at all." This new and different kind of sprayer whirls out the paint by centrifugal action. Painting with the *Rogers Rotary* was found about one third as fast as painting with a 3-inch brush, and about one fourth as fast as applying the paint with a roller, and it was judged that one could paint several times faster with a conventional spray gun than with the *Rogers Rotary*.

The fairly sharp cut-off at the edge of the *Rogers Rotary's* spray pattern as contrasted with the gradual thinning out at the edge which is observed with conventional air-pressure-operated paint sprayers makes possible closer control of the distribution of paint even by an inexperienced user, but this characteristic is not an unmixed blessing. When the spray is moved back and forth to cover an area, the action of the *Rogers Rotary* causes noticeable stripes from overlapping of successive passes, whereas with the more diffuse edge-patterns of conventional guns the paint can be blended by a reasonably skilled user so that no overlapping is in evidence.

The Underwriters' Laboratories' listing of rotary disk paint sprayers includes the caution, "When a flammable liquid is sprayed, there may be danger of fire or explosion, especially in closed rooms." For this reason, Consumers' Research does not recommend use of the *Rogers Rotary* for painting interior walls and ceilings with a flammable paint, varnish, or enamel. Aside from this, rotary paint guns should probably not be used for any work indoors because of the danger of paint-spotting of wallpaper, wall finishes, furniture, etc. In our trials, less paint mist got into the surrounding air than is usual with air-powered guns, but the amount spread about was substantial, despite claims of "practically no misting."

One of several firms selling the *Rogers Rotary* by mail advertises that it "works perfectly with any paint"; the instructions with the gun say "Do not use laquer or laquer base paints," clearly a restriction on the kinds of paint to be used, even if the spelling of lacquer is unusual. The ad says "it can't possibly clog—ever!" while the instructions advise if a sputtering spray occurs, "check orifice holes for possible clogging." The words of the criticized advertisement, "change colors or clean gun in seconds," give an entirely false impression of how easy it was to clean the gun; the instructions outline a six-step cleaning process that *can* be accomplished "in seconds," it is true—if "seconds" can be stretched to mean about *600* of them. Changing colors quickly would require extra cans, one for each color and one besides for solvent or thinner for cleaning between colors. The sprayer is supplied with *one* can; extra ones cost $2.50 each, a vitally important fact not mentioned in the advertising.

The *Rogers Rotary* sprayer is suitable for painting furniture and a good many small objects. An inexperienced "do-it-yourselfer" could probably learn to use it reasonably well, in less time than he could learn proper use of a conventional compressed-air sprayer. If you have a good many small items to paint, however, you should keep in mind that, according to the guarantee card, the *Rogers Rotary* "has been designed for paint craftsmen—not for production line service," a nice distinction the purchaser is not made aware of until he receives his purchase and its guarantee.

Whether this gadget is worth its price of about $50 is dependent on how much work one has to do of the sort this sprayer is suitable for. (Consumers' Research was able to get a "factory reconditioned" sprayer with new gun guarantee at $29.94 from Macy's in New York City, and it didn't seem to us that most people would find it a wise purchase even at that price.)

B. Intermediate

Rogers Rotary Paint Gun, Model 1101 (Manufactured by Martin Stove & Range Co., Florence, Ala.; sold in stores and by mail-order firms; information about sources in particular areas should be sought from the manufacturer) $49.95. Paint sprayer, self-contained in single unit, which by means of a nylon "screw pump" lifts paint from a 1-qt. aluminum container to a spinning disk running at high speed that throws it outward in a fine spray through a rectangular opening by centrifugal force. Pattern width is controlled by a gate. Motor rated 115 volts, 1.0 amp. The device is sturdily built, is listed by U.L., and is suitable for use by the home hobbyist who will recognize its limitations and who will not base his purchase upon the persuasive claims and implications of sales literature. ¶A similar gun, perhaps almost identical, is sold under the name *Electr-O Airless*.

Stereo record players

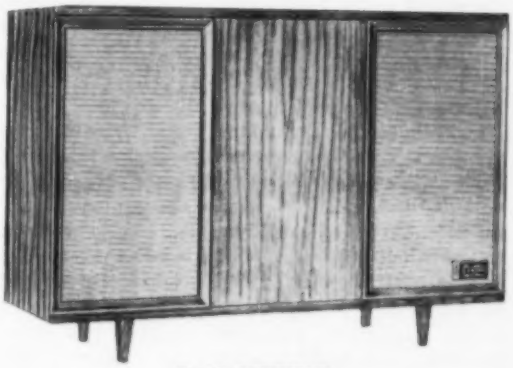
(*The beginning of this article is on page 2*)

than the quality of the electronic and audio equipment mounted in the cabinets. It is evident that the manufacturers consider that the woman of the home gives much weight to the appearance of the cabinet and will not be too critical of the quality of the sound or the reality of the stereo effect produced.

Inside the cabinet, one finds the record changer, that mechanical robot which nowadays plays at any one of four speeds and is capable of dealing with 7-, 10-, or 12-inch records. The changer should be equipped preferably with a 4-pole motor and a stereo cartridge having two styli, one with a sapphire tip for playing 78 rpm. records, the other with a diamond tip for playing stereophonic and LP monophonic disks. If a dual sapphire stylus is used, have the dealer remove it and replace it with a sapphire-diamond stylus combination (about $5 to $8) before delivery. The diamond will pay for itself in far longer life, better sound quality, and much longer life for the records.

The specifications for the amplifier present the greatest opportunities for misunderstanding and confusion. Several major manufacturers now give two figures for power output. One, the peak power output, is usually double the other, the maximum undistorted output, and may be disregarded by the consumer. It does have meaning but is used principally at this time as a sales gimmick. Maximum undistorted power output, however, does give one some clue to the design of the amplifier. Unfortunately, as the specifications are now usually expressed, the figure given must be divided by two to obtain the power output from one channel, which is the figure of importance. If the single-channel undistorted power output is 10 watts or more, it can be assumed that each of the two output stages of the amplifier has two tubes connected in push-pull. This arrangement is much more desirable from a fidelity standpoint than a so-called single-ended output stage.

If the amplifier provides at least 10 watts per channel "undistorted output," then it is worth while to examine the controls that are present. At a minimum, you will have definite need for controls for balance, volume, bass, and treble. More expensive models may employ separate bass and treble controls for each channel and may also include a control which changes the relative loudness of the bass and treble frequencies to compensate for the changes in sensitivity of the ear to different levels of volume. (This function, called volume or loudness compensation, is sometimes made a part of a circuit related to the volume control and operated by it.)



Zenith SFD2505WT

On most models, there will also be a multiposition switch by which one selects either the monophonic or stereophonic function. AM and FM radio or a tape recorder may be added by the experienced consumer since many sets include radio and tape recorder input connectors. If an AM-FM radio is included in the combination, you may wish to use either the AM or FM sections singly—or possibly in combination, if there are stations in your area which broadcast in stereo by transmitting one channel over AM and the other over FM simultaneously.

The loud-speaker systems provided call for close attention. Fundamentally, four speakers are needed—a large 12- or 15-inch diameter woofer for the lower frequencies and a small cone, electrostatic, or "horn" tweeter for the "highs" for each channel, and these four are a minimum requirement. If of good quality, and properly interrelated by the designer, they may well provide better sound quality than is possible from a different model having three or four speakers of mediocre quality for each channel.

Speaker positioning, too, is most important. You may perceive the stereo effect if the separate channel speaker systems are relatively close together in a large cabinet, but you can't obtain the full enjoyment of listening to a stereo record unless the two systems are well separated—by 8 feet or more, if the room size permits. Thus, two separate speaker enclosures—or one enclosure separated from the main cabinet—are to be preferred, and the speaker systems themselves should be identical, in so far as possible.

There is a maverick among the combinations tested, the *Motorola SK28M*. Motorola not only produces the usual 2-channel models of the kind previously discussed but also makes several models which employ *three* so-called channels to feed the sound to the loud-speakers. The two sources of music from the stereo pickup are separated electrically at low levels into three effective signals, one carrying the middle and high frequencies of channel 1, another carrying the middle and high frequencies of channel 2, and the third, the combined bass frequencies from both channels. (The original recordings have *only two* separate and distinct trains of signals containing all frequencies present in the music.) The idea works out satisfactorily in practice; low frequencies below 200-300 cycles per second are generally thought to be non-directional in nature and, therefore, need not be handled by separated speakers in a stereo system. It should be pointed out, however, that the term channel, by common usage, refers to the path taken by the live music, through the recording apparatus, onto the record and thence through the stereo cartridge, amplifier, and loud-speaker. No three-channel recordings are available to the general public. Thus Motorola's and some other manufacturers' choice of words to gain an advantage in sales can only be considered as misleading to consumers. You can't change a 2-channel recording into a 3-channel one by anything you can do after the record has been made.

Some cabinet and speaker resonances were present in all models tested; these resonances were not considered objectionable, however, at listening levels normally encountered. The manufacturer's list price is given in each listing.

Listings are in alphabetical order within the *A*-, *B*-, and *C*-rated groups.

A. Recommended

Magnavox Stereorama, Model 2-ST 203F4 (The Magnavox Co., Fort Wayne, Ind.) $400. Remote speaker, *Model S-34*, $65.

For equipment in this price category, the Magnavox provided a good volume of sound; it had a well-constructed and nicely-finished cabinet and a good AM-FM radio.

Well-built wooden cabinet, 45 in. wide, 30½ in. high (including legs), 17¾ in. deep. Amplifiers have push-pull output, a good type. Six speakers: two 15-in. for bass, one 8-in. for mid-range, and three 5-in. for treble. *Collaro Model 200F* changer and *Electro-Voice* cartridge with a diamond stylus and a sapphire stylus, a good combination, for most users.

Controls, inside cabinet at top: tuner on-off, player on-off, treble, bass, loudness, tuning, and selector switch for stereo, phono, FM, AM, tape. One-year warranty on tubes and parts.

Workmanship, satisfactory. Ease of servicing, good. Electrical power input, 190 watts. Instruction booklet, satisfactory, but does not include, as it should, a schematic diagram of the set. Power output, 17 watts at 2½% distortion. Acoustical range, 30 to 16,000 c.p.s., very good. The AM-FM tuner gave good quality reception and could be used for AM and FM stereo broadcasts (see text).

Motorola, Model SK28M (Motorola, Inc., Chicago) $370. (Illustrated on page 2.)

The Motorola was judged one of the best of the record players tested. Sound quality was good, and the cabinet was well constructed and nicely finished.

Well-built wooden cabinet, 52 in. wide, 32 in. high (including legs), 18½ in. deep. A "3-channel" system (see text). Bass channel used push-pull output and a 15-in. woofer speaker in center. The left and right channels used single-ended output each with an 8-in. mid-range speaker and a 5-in. high-frequency tweeter. The changer was apparently made by the V-M Corp., and was equipped with a cartridge with one diamond and one sapphire stylus (good).

Controls, inside cabinet at top: function selector for stereo or mono; 5-position selector switch, loudness, treble, bass, and balance. No radio tuner in model tested, but provision was made for installation of an *HK 43* FM-AM tuner at extra cost. 90-day warranty on parts and tubes.

Workmanship, very good. Ease of servicing, good. Power input, 185 watts. Good instruction booklet. Power output, 19 watts at 2½% distortion. Acoustical range, approximately 30 to 18,000 c.p.s.

V-M (Voice of Music), Model 812 (V-M Corp., Benton Harbor, Mich.) $300. *Model 912* at $410 was not tested; it is similar, but includes an AM-FM tuner.

The V-M was judged above average in regard to simplicity of design and quality of construction.

Very well-built and nicely-finished wood cabinet, 46½ in. wide, 31½ in. high (including legs), 16¾ in. deep. Amplifiers had push-pull output, good. Four speakers: a 12-in. woofer and a 3½ in. tweeter for each channel. *V-M* changer and *Sonotone* ceramic cartridge with diamond and sapphire styli (a good combination).

Controls, inside cabinet at top: selector switch for on-off, phono, tape, stereo, mono; bass, treble, volume. 90-day warranty on parts and workmanship.

Workmanship, very good. Ease of servicing, good. Power input, 145 watts. Instruction booklet was of limited value. Power output, 15 watts at 2½% distortion. Acoustical range, 40 to 16,000 c.p.s., very good.

A–

Westinghouse Concerto, Model H-M1400 (TV-Radio Div., Westinghouse Electric & Mfg. Co., Metuchen, N.J.) $450.

Although somewhat above average in several respects, the Concerto was judged not worthy of an A-Recommended rating because of certain deficiencies in design.

Well-built wooden cabinet, 42½ in. wide, 31½ in. high (including legs), 18½ in. deep The amplifier is so connected that the two output tubes are used in push-pull for monophonic reproduction, and matrixed for stereo; a tolerable arrangement, but not one to be expected in equipment in the $450 price range. Four

Westinghouse Concerto H-M1400

speakers: a 12-in. woofer and a 4-in. tweeter for each channel. *V-M 1211* changer and ceramic cartridge with diamond and sapphire styli.

Controls, inside cabinet at top: 8-position selector switch for stereo, mono, AM, FM, multiplexing; loudness, balance, bass, treble, tuning for AM and FM and automatic frequency control switch for FM. 90-day warranty on parts and workmanship.

Workmanship, satisfactory. Ease of servicing, good. Power input, 210 watts. Instruction booklet, very brief and complicated. Power output, 14 watts at 2½% distortion. Acoustical range, 40 to 15,500 c.p.s., good. The AM-FM tuner gave good quality reception and could be used for AM and FM stereo broadcasts.

Zenith, Model SFD2515W (Zenith Radio Corp., 6001 Dickens Ave., Chicago 39) $375.

This model was obtained too late to be subjected to the complete test procedure. Listening tests and a critical examination were accomplished, however, and it is the opinion of Consumers' Research's engineers that the *SFD2515W* would likely have received an *A-Recommended* rating. The amplifiers had push-pull output and provided ample power to the two speakers used in each channel. A dual sapphire-diamond stylus was employed.

B. Intermediate

Philco, Model 1618M (Philco Corp., Tioga and C Sts., Philadelphia 34) $220. Extra speakers (Type HSS-10), and AM-FM tuner (*Model RT-300*), and a tape recorder can be added.

The Philco provided satisfactory sound quality. Note, however, that at its comparatively low price the Philco is not to be expected to provide performance as good as several other more expensive brands tested.

Well-built cabinet, 31 in. wide, 26½ in. high (including legs), 20½ in. deep. Amplifiers had single-ended output (not the more desirable type). Four speakers: one 8-in. woofer and one 4-in. tweeter, for each channel. *Philco* changer and ceramic cartridge with dual sapphire styli.

Controls, inside cabinet at top: balance, treble, volume, bass. 90-day warranty on parts and workmanship.

Workmanship, very good. Ease of servicing, good (removal of the bottom of the cabinet provides access to the chassis). Power input, 80 watts. Instructions were satisfactory. Power output, 6 watts at 2½% distortion. Acoustical range, 40 to 10,000 c.p.s., was comparatively narrow. Slight turntable rumble.

Silvertone, Model 60 (Sears-Roebuck's Cat. No. 57—60N) $240, plus shipping.

The Silvertone represents very good value at $240, in consideration of the various features supplied. The quality of sound output was not as good as that from the more expensive A-Recommended brands.

The cabinet was constructed of well-finished hardboard, 37 in. wide, 27½ in. high (including legs), 15 in. deep. Amplifiers have push-pull output, a good type. Four speakers: two 8-in. woofers mounted in front of cabinet at ends, two 4-in. tweeters in separate swing-out cabinets at each side (can also be detached and placed up to 20 ft. apart, a desirable feature). Changer was apparently made specially for Sears and had a ceramic cartridge with diamond and sapphire styli (good).

Controls, inside cabinet at top: selector for on-off, AM, FM, and phono; treble, bass, loudness, and balance; AM-FM tuning, record compensation. 90-day warranty on parts and workmanship.

Workmanship, very good. Ease of servicing, good. Power input, 145 watts. Instruction booklet, complete and well written. Power output, 17 watts at 2½% distortion. Acoustical range, 40 to 11,000 c.p.s. Reception with the 6-tube AM-FM tuner was satisfactory.

Zenith, Model SFD2505WT (Zenith Radio Corp., 6001 Dickens Ave., Chicago 39) $300. For improved stereo effect, *Model DR100H* extended-range speakers are available at an extra cost of $28 each. AM-FM tuner, *Model FT-10*, can be added at extra cost.

The Zenith combined straightforward design with good sound quality. It was, however, lacking in some respects when compared with some of the other brands tested.

Well-built wood cabinet, 44 in. wide, 31 in. high (including legs), 16¼ in. deep. Amplifiers were single-ended (not as desirable as push-pull output—see text). Four speakers: one 12-in. woofer and one 5-in. tweeter, for each channel. *Zenith Cobramatic* changer and ceramic cartridge with dual sapphire styli.

Controls, inside cabinet at top: loudness and balance, bass combined with stereo-mono switching, treble. 90-day warranty on parts and workmanship.

Workmanship, very good. Ease of servicing, good. Power input, 115 watts. The instruction booklet was satisfactory. Power output, 15 watts at 2½% distortion. Acoustical range, 40 to 14,000 c.p.s.

C. Not Recommended

RCA, Model PM 22 MK XX11 (RCA Victor Radio & TV Div., Radio Corp. of America, Camden, N.J.) $240.

Two test samples of the *PM 22 MK XX11* were checked and neither provided satisfactory performance. Tracking difficulties were encountered with one sample, a problem concerned with the record changer and pickup. Both samples exhibited excessive hum and/or rumble.

One sample of the *240KV775SU* (a combination TV-stereo record player) was then checked and on this, too, difficulties were encountered (low-frequency feedback, apparently originating in the turntable).

Chevrolet 6 and V-8

A very good car, as in previous years, but in some respects the new Chevrolet was judged to be less desirable than the 1959 model; we found nothing about these 1960 Chevrolets which should make an owner of a 1959 model in good condition eager to trade. ¶Chevrolet cars have shown uniformly favorable resale and turn-in values for a number of years, an important characteristic of any car from the consumer's standpoint.

THERE is nothing particularly new about this year's *Chevrolet*, but it will undoubtedly have large sales, based on past performance and the loyalty of previous *Chevrolet* owners—unless they decide in the interest of lower power, more miles per gallon of gasoline, and easier parking, to switch to one of the smaller "compact" cars.

The startling and radical treatment of the rear of the 1959 model *Chevrolets* has been toned down somewhat in the 1960 model, but it is still a far cry from the simpler, clean and far more practical design of the rear of *Chevrolet's Corvair*.

The new *Chevrolet* engines are very similar to those of 1959, except that the standard V-8 engine has been reduced in rated horsepower from 185 to 170 and is claimed to be designed "to deliver top economy along with spirited performance."

Headroom and leg room both in the front and rear seating spaces were adequate. Consumers' Research found that the *Chevrolet* was not easier to get into (and out of) than most cars (the advertising claimed it was) for the dog's leg supporting the wrap-around windshield and the low roof interfered, as usual, with easy entrance and exit. The front seats were not as comfortable as the rear seats; in the rear, floor wells permitted a greater effective seat height.

The "X" type frame, considered by Consumers' Research as less desirable from a safety standpoint than a frame with heavy side members, is continued again this year as also is the poor design at the center doorposts with its serious hazards to children's fingers (discussed more fully in CONSUMER BULLETIN, March 1959). There were, praise Allah, no hood or fender ornaments this year to constitute a hazard to pedestrians. (They finally changed, but they're slow learners, and slow to act on matters affecting safety, those motor car manufacturers!)

Controls were well marked and illuminated for night driving. The usual, relatively undesirable, indicating lights were used instead of an ammeter and oil-pressure gauge. The high lip at the rear of the trunk made loading and unloading the trunk difficult if heavy luggage is to be handled. Visibility to the rear was poor, due to an unsatisfactory rear-view mirror and the small angle of slope of the rear window. This is an inherently bad feature, fortunately corrected on a number of makes in recent years, as the window readily collects dust, mud, and snow, to impair vision.

Riding and handling qualities

Riding quality was good on smooth roads, fair on rough roads. Cornering ability was satisfactory but not as good as with some other cars tested. Front seat passengers and drivers complained of discomfort on long trips.

Prices

The posted price of the *Chevrolet V-8 Bel Air* 4-door sedan tested by Consumers' Research was $3016, itemized as follows:

Manufacturer's suggested retail price, $2545 (the *Chevrolet 6* was $107 less); radio, $69.96; heater and defroster, $74.25; *Powerglide* automatic transmission, $199.10; white sidewall tires, $31.55; 2-speed windshield wiper and washer, $16.15; anti-freeze, $5; outside mirror, $6; freight, $69.

Performance on road tests

Acceleration times were:

	6	V-8
0 to 60 m.p.h.	20.1 sec.	14.0 sec.
20 to 50 m.p.h.	9.5 sec.	7.1 sec.
40 to 60 m.p.h.	11.4 sec.	7.0 sec.

The *Chevrolet 6* was somewhat faster than the *Ford 6* in acceleration except in the 40 to 60 miles-per-hour range. The figures for the *V-8* corre-

spond to slightly higher accelerations than were obtained with last year's car; they are, of course, more than ample for any driver.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the *Chevrolet 6* with *Powerglide* gave 17.4 miles per gallon. This was not as good economy as was obtained with the *Chevrolet V-8* or the *Ford 6*. However, the *Chevrolet 6* had very low mileage at the time of test, and we believe should show somewhat better miles per gallon when broken in more fully. At a constant speed of 50 miles per hour, the *V-8* with *Powerglide* gave 17.7 miles per gallon (about 10 percent better than last year) but the over-all gasoline mileage for the first 1300 miles was only 14.5 miles per gallon.

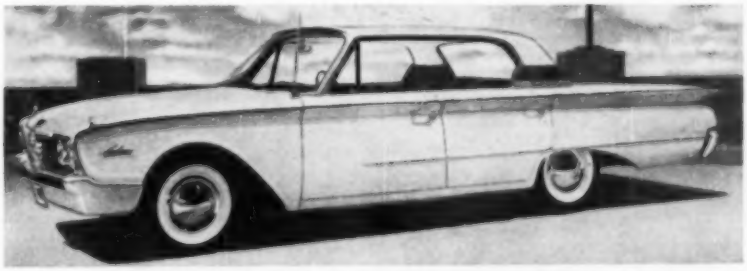
Speedometer and odometer errors

On the *6*, the speedometer was about 10 percent fast, odometer 5 percent fast. On the *V-8*, speedometer and odometer were both about 6 percent fast.

Chevrolet specifications

	6	V-8
Taxable horsepower	30.4	48
Taxable weight, pounds	3550	3575
Engine		
Type	6 in line overhead valves	V-8 overhead valves
Piston displacement, cubic inches	235.5	283
Rated maximum horsepower at engine rpm.	135 at 4000	170 at 4200
Compression ratio	8.25 to 1	8.5 to 1
Grade of gasoline	Regular	Regular
Cooling system capacity with heater, quarts	18	18.5
Chassis and body		
Type	X-frame	X-frame
Wheelbase, inches	119	119
Over-all length, inches	211	211
Width, inches	81	81
Height, inches	56	56
Tires	7.50 x 14	7.50 x 14
Rear axle ratio	3.55 to 1*	3.36 to 1†
Brake area, square inches	186	186
Turning diameter, feet	40.8	40.8
Minimum road clearance, inches	6.0	6.0
Other details		
Battery	12-volt 53-amp./hr.	12-volt 53-amp.-hr.
Gasoline tank capacity, gallons	20	20
Curb weight of car tested, pounds	3805	3840
Trunk space, cubic feet	30.0	30.0

* 3.36 to 1 with *Powerglide*.
† 3.08 to 1 with *Powerglide*.



Ford 6 and V-8

This year there appears to be little to choose between the Ford and Chevrolet; both are good cars of their type, and the final choice may be one of personal preference. Turn-in value is approximately the same as Chevrolet.

THIS YEAR the *Custom 300 Series* have been dropped from the Ford line, leaving the *Fairlane* as the lowest-priced "standard-size" model. The 1960 models are 6 inches longer, 5 inches wider, and 1 inch lower than the 1959 models; the changes certainly seem in the wrong direction, when the trend of public support is definitely toward smaller, more compact cars. 1960 *Fords* and four other 1960 makes exceed the 80-inch width limit. In Tennessee, cars wider than 80 inches must have reflector tape "on the corners of front and rear bumpers." (In Wisconsin, for a time, "clearance lights" were required by law for several wide cars.)

The tread widths on the *Ford* have also been increased. The "sculptured" styling, while not as extreme as that of *Chevrolet*, will, we believe, be less pleasing to many than simpler lines would be, and the new bodies will, of course, be more costly to repair than those with the simpler, cleaner style of Ford's "compact" car, the *Falcon*.

On the new *Fords*, the dog's-legs supporting the wrap-around windshield have been eliminated; with this change the car is easier to enter and leave without banging one's knees. Headroom was not adequate in the front for tall persons wearing hats; leg room was adequate.

The parking brake release is now on the dash, a worth-while improvement. Instruments and

controls were well illuminated and identified, except for the automatic transmission shift quadrant. Although the P-R-N-D-L positions were lighted, the pointer could not be seen easily; its poor illumination made it difficult to determine the gear position the transmission was in.

Indicating lights were used in place of an ammeter and oil pressure gauge (the meters and gauges are to be preferred). The sun visors when not in use were very close to the heads of the driver and front seat passenger, with corresponding hazard in the event of a sudden stop. Like the General Motors' cars, the door design at the center doorposts presents a hazard to children's fingers (see *Chevrolet*). There was no hood ornament, but there was a small bull's-eye ornament on each fender. Though the car would be better from a safety standpoint without these projections, they were, however, not considered to be especially hazardous to pedestrians.

Riding and handling qualities

The riding quality of the *Fords* was judged to be good, somewhat firmer than that of the *Chevrolet*. Action in cornering was good, with only slight lean on turns. Some drivers complained of discomfort because the angle of the back of the front seat was too steep, forcing them to sit more nearly erect than they found comfortable.

Prices

The six-cylinder model tested by Consumers' Research was a *Fairlane 500 Town Sedan* with a posted price of $2793.45, itemized as follows:

Manufacturer's suggested list, $2388 (185-horsepower V-8 is $113 extra); radio, $58.50; heater and defroster, $75.10; *Fordomatic* transmission, $179.80; padded dash and visors, $24.30; freight, $67.75. The V-8 tested by Consumers' Research was a *Galaxie* 4-door sedan with a standard 185-horsepower V-8 engine and a manufacturer's suggested list price of $2716.

Performance on road tests

Acceleration times were (cars equipped with *Fordomatic* transmission):

	6	V-8	
		D1	D2
0 to 60 m.p.h.	23.0 sec.	17.1 sec.	18.8 sec.
20 to 50 m.p.h.	12.0 sec.	9.7 sec.	10.2 sec.
40 to 60 m.p.h.	10.6 sec.	8.5 sec.	8.5 sec.

The *6* was somewhat slower in the 0 to 60 miles-per-hour range, but faster in the 20 to 50 and 40

Plymouth

The 1960 Plymouth has some good points and some unsatisfactory ones. There were some deficiencies in workmanship on the body and chrome parts and these qualities were judged inferior to those seen on Chevrolet and Ford Overall, we judge the Plymouth to rank somewhat below these two cars. Turn-in values on Plymouth cars are somewhat lower than on Chevrolets and Fords.

THE most significant change in this year's *Plymouth* is the adoption of a unit-construction body and frame which the maker claims to be 100 percent stronger in resisting twist and 40 percent stronger in resisting bending than the former construction using a separate body and frame.

Worth-while safety features are the "Safe-T-Matic" door latches available at a very substantial extra cost ($29.85 on 4-door models, $23.45 on 2-door models) and the four-light emergency warning flasher system. The "Safe-T-Matic" automatically locks all doors by a vacuum system when the engine is running. The warning system, operated by a switch on the instrument panel,

to 60 miles-per-hour ranges than last year's *Ford 6* with standard transmission. Acceleration rates were judged adequate for almost any careful or conservative driver. The *Ford V-8's* acceleration was about 20 percent slower in the 0 to 60 and 40 to 60 miles-per-hour ranges, and very much slower in the 20 to 50 miles-per-hour range than the *Chevrolet V-8* which has an engine of 170 rated horsepower; the *Ford* acceleration figures were nevertheless judged to be more than ample.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the 1960 *Ford 6* with *Fordomatic* transmission gave 18.6 miles per gallon (about 5 percent less than the 1959 *Ford 6* with standard transmission).

The *Ford V-8* with *Cruise-O-Matic* at a constant speed of 50 miles per hour also gave 18.6 miles per gallon, or about 5 percent better than the corresponding *Chevrolet V-8*.

Speedometer and odometer errors

Speedometers were about 8 percent fast at 50 miles per hour; odometers were 6 percent fast. (Much too large an error, in both cases.)

Ford specifications

	6	V-8
Taxable horsepower	31.54	45
Taxable weight, pounds	3610	3710
Engine		
Type	6 in line overhead valves	V-8 overhead valves
Piston displacement, cubic inches	223	292
Rated maximum horsepower at stated rpm.	145 at 4000	185 at 4200
Compression ratio	8.4 to 1	8.8 to 1
Cooling system capacity with heater, quarts	16	20
Grade of gasoline	Regular	Regular
Chassis and body		
Type of frame	Separate frame and body	
Wheelbase, inches	119	119
Over-all length, inches	214	214
Width, inches	81.5	81.5
Height, inches	55	55
Tires	7.50 x 14	7.50 x 14
Rear axle ratio	3.56 to 1	3.56 to 1 (3.1 to 1)*
Brake area, square inches	191	191
Turning diameter, feet	43	43
Minimum road clearance, inches	5.5	5.5
Other details		
Battery	12-volt 55-amp.-hr.	12-volt 55-amp.-hr.
Gasoline tank capacity, gallons	20	20
Curb weight of cars tested, pounds	3780	3895
Trunk space, cubic feet	33.5	33.5

* With automatic transmission.

causes all the front and rear indicator turn lights to flash continually as a warning to other drivers when the car is stopped. The *Plymouth* doors and center doorpost present a hazard to children's fingers of a nature similar to that reported on the *Chevrolet;* a hazard to fingers is also present at the space between the front door and the bottom of the windshield.

Plymouth has given attention to making the front seat adjustable for different drivers. The seat may be lowered, moved forward or back, or tilted, and locked in the most desirable position by four adjusting bolts; the special adjustments are in addition to the conventional two-way adjustment usually available on automobile front seats.

The speedometer, which was of a modified thermometer type, was somewhat difficult to read; squares are filled in at 5-mile intervals as speed increases; this method of indicating speed gives a driver a feeling of uncertainty.

The oval steering wheel appeared to be satisfactory after the drivers became used to it, except that the upper edge of the wheel tended to block a tall driver's view of the odometer.

The car was easy to enter and leave. Leg room and headroom were satisfactory. Illumination of the instrument panel was satisfactory for night driving. The parking brake employed which acts on the transmission output shaft instead of the rear wheels is unsatisfactory as an emergency brake should the service brakes fail. This type of brake which is used on all Chrysler-built cars except the *Valiant* is particularly undesirable, because Chrysler cars' automatic transmissions do not have any "park" position. Service brakes were satisfactory. Heater and defroster were very satisfactory.

Prices

The model tested by CR was a *Plymouth Fury V-8* 4-door hardtop with *TorqueFlite* transmission, power steering, and power brakes, with a posted price of $3395.80, itemized as follows:

Manufacturer's suggested price, $2775 (4-door sedan is $2694); radio, $58.50; heater and defroster, $74.40; *TorqueFlite* (push-button) transmission, $210.70; power steering, $76.60; power brakes, $42.60; padded instrument panel, $13.50; wheel covers, $18.55; variable speed windshield wiper, $5.55; 7.50 x 14 white sidewall tires, $33.35; undercoat, $12.85; anti-freeze, $5.20; freight, $69.

Performance on road tests

Acceleration times were:

0 to 60 m.p.h.	16.6 sec.
20 to 50 m.p.h.	11.9 sec.
40 to 60 m.p.h.	9.0 sec.

Considerably slower in acceleration than last year's model with the same horsepower; the *Plymouth V-8* was also appreciably slower than the 1960 *Chevrolet V-8*. Lack of power in acceleration was quite noticeable on hills.

Riding and handling qualities

Riding quality was very good over normal roads at speeds up to 65 miles per hour, but on rough roads and over potholes the ride became somewhat bouncy. The road bumps, however, were not transmitted to the steering wheel. Cornering (with power steering) was good but the car had noticeable lean on sharp turns. The car was relatively quiet in operation.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour, the car gave about 17.5 miles per gallon, which was about 5 percent better than the 1959 *Plymouth V-8*.

Speedometer and odometer errors

Speedometer was about 2 percent slow, which is rather unusual as most speedometers read too high (fast). Odometer was approximately 5 percent fast.

Plymouth specifications

	6	V-8
Taxable horsepower	27.7	48.9
Taxable weight, pounds	3400	3550
Engine		
Type	6 in line overhead valves	V-8 overhead valves
Piston displacement, cubic inches	225	318
Rated maximum horsepower at stated rpm.	145 at 4000	230 at 4400
Compression ratio	8.5 to 1	9.0 to 1
Cooling system capacity with heater, quarts	15	21
Grade of gasoline	Regular	Regular
Chassis and body		
Type of frame	Unitized	Unitized
Wheelbase, inches	118	118
Over-all length, inches	209	209
Width, inches	79.0	79.0
Height, inches	55.0	55.0
Tires	7.50 x 14	7.50 x 14
Rear axle ratio		
Standard	3.54 to 1	3.54 to 1
TorqueFlite	3.31 to 1	2.93 to 1
Brake area, square inches	184	184
Turning diameter, feet	42.5	42.5
Minimum road clearance, inches	5.0 (low)	5.0 (low)
Other details		
Battery	12-volt 50-amp.-hr.	12-volt 50-amp.-hr.
Gasoline tank capacity, gallons	20	20
Curb weight of car tested, pounds	—	3695
Trunk space, cubic feet	29.4	29.4

Studebaker Lark 6

The Lark is a well-designed "compact" car conservatively styled. The Lark's good qualities are such that it should be seriously considered by those interested in a car in the low-priced 6-cylinder, compact-car class, which includes also the Corvair, Falcon, Rambler American, and Valiant. The Lark is priced about the same as the Corvair and Valiant, and about $70 above the Falcon.

SEVERAL small but important changes have been made in the 1960 model *Lark*, changes which in our opinion have resulted in a much improved car. The new model gives better acceleration and more miles per gallon, and the *Lark* is now a much quieter car that operates more smoothly, and is on the whole easy to steer and park. Leg room was satisfactory, but headroom was barely adequate for tall people wearing hats. The car was easy to enter and leave at the front, but the back was somewhat more difficult. The chair-height seats were very comfortable, and the floor had no step-down.

Tall drivers felt that the instrument panel was too low for easy observation. Illumination of dashboard instruments was judged adequate. Fender panels were bolted on, a type of construction which should greatly reduce the costs of repairing damages arising in minor accidents.

Prices

The model tested by Consumers' Research was a *Lark 6* overdrive-equipped 2-door deluxe sedan with a posted price of $2359.49, itemized as follows:

Manufacturer's suggested retail price, $1976 (4-door sedan is $70 extra); overdrive, $110.40; heater-defroster,

$71; radio and antenna, $62.89; accessory kit, $29.25; deluxe steering wheel, $6.73; cigarette lighter, $3.95; undercoating, $19.85; distribution and delivery, $79.42.

Riding and handling qualities

At speeds up to about 55 miles per hour on smooth and moderately rough roads, riding quality was judged satisfactory. On sharp turns, body lean was noticeable but not objectionable. The engine was relatively quiet; road noise was very low.

Performance on road tests

Acceleration times were:

	1960	1959
0 to 60 m.p.h.	21.4 sec.	25.4 sec.
20 to 50 m.p.h.	13.5 sec.	15.7 sec.
40 to 60 m.p.h.	12.2 sec.	15.1 sec.

Although the 1960 *Lark 6* has the same rated horsepower as the 1959 model, acceleration was significantly improved. The *Lark* was better in accelerating ability than the *Corvair* or *Falcon* but not quite as good as the *Valiant*.

Gasoline mileage under test conditions

At a constant speed of 50 miles per hour in overdrive, the *Lark 6* gave 26.6 miles per gallon, an improvement of close to 20 percent over the car tested last year and about equal to the miles-per-gallon figure for the *Valiant* without overdrive. It is questionable whether the overdrive is worth its $110 extra cost, for even if it increased gasoline mileage 10 percent over the standard transmission car, the investment would not pay off for most drivers, for it would take about 10 years of gasoline savings to pay for the overdrive feature (assuming the car is run 10,000 miles per year).

Speedometer and odometer errors

Speedometer was about 5 percent fast, odometer about 1 percent fast.

Lark specifications

	6	8
Taxable horsepower	21.6	40.6
Taxable weight, pounds	2592	2941
Engine		
Type	6 in line overhead valves	V-8 overhead valves
Piston displacement, cubic inches	169.6	259.2
Rated maximum horsepower at stated rpm.	90 at 4000	180 at 4500
Compression ratio	8.3 to 1	8.8 to 1
Grade of gasoline	Regular	Regular
Cooling system capacity with heater, quarts	19	18
Chassis and body		
Type of frame	Box section	Box section
Wheelbase, inches	108.5	108.5
Over-all length, inches	175	175
Width, inches	71	71
Height, inches	58	58
Tires	5.90 x 15	6.40 x 15
Rear axle ratio	3.73 to 1*	3.31 to 1†
Brake area, square inches	120	145
Turning diameter, feet	37.5	37.5
Minimum road clearance, inches	6.1	6.1
Other details		
Battery	12-volt 50-amp.-hr.	12-volt 50-amp.-hr.
Gasoline tank capacity, gallons	18	18
Curb weight, pounds	2730	3090
Trunk space, cubic feet	16.5	16.5

* Standard and automatic transmission; 4.1 to 1 with overdrive.
† 3.07 to 1 with automatic, 3.54 to 1 with overdrive.

Brief Index of Consumer Bulletins, January through March 1960

*Entries marked (*) are longer or more comprehensive items.

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NOTE: Reprints from '57-'58-'59 Consumer Bulletins are listed on p. 33 of Feb. '60 issue.

● OFF THE EDITOR'S CHEST

The American Hotel Association pioneers in developing product performance requirements

BUYING on a trial-and-error basis is a waste of time and effort for anyone, and especially for the business executive who must make large-quantity purchases. If the manager or purchasing agent of a successful hotel or motel were to use current advertising claims, particularly those on television, as the basis for selecting a scouring powder, dishwashing compound, furniture and floor polish, or general-purpose cleaner for use by his maintenance staff, he would certainly be confused. In order to provide its members with a sound, practical basis for selecting the many chemical specialties and other products that they use in considerable quantity each year, the American Hotel Association has set up an effective program for certifying a variety of important products used in hotel operation as meeting minimum performance requirements.

As Mr. J. S. Fassett, director of the A.H.A.'s membership services department, pointed out in presenting the program to an industry group in New York City early this year, the A.H.A. is endeavoring to provide the hotel purchasing executive with the knowledge he needs to make an intelligent selection of products on the basis of recognized standards which have been developed by competent and responsible experts in many fields. Although some manufacturers are reluctant to admit it, Mr. Fassett points out that there are differences in quality among products and the busy executive will find that the A.H.A.'s Certified Products List helps eliminate substandard, dangerous, or harmful products so that he can do a more efficient and economical purchasing job in a minimum of time. By eliminating inferior or unsuitable products, the purchaser makes savings that amount to more than just the purchase price of the product; they include as well the cost of labor wasted in trying to use something that doesn't do the job or doesn't do it well; and in some cases the buyer may also save the cost of damage to an expensive floor or carpet or injury to the user. The Products List gives the hotel men in purchasing departments a convenient tool for implementing sound purchase practices.

The Certified Products List of the American Hotel Association first appeared in mimeographed form over 10 years ago. It is now a printed leaflet of some 16 pages listing products that conform to A.H.A. Minimum Performance Requirements for the properties considered essential for good performance. The abrasive cleaners, for example, met requirements set for the degree of abrasiveness, alkalinity or pH, rinsing properties, and efficiency in cleaning. The floor polishes listed were given and passed floor service tests and, in addition, were found to conform to requirements for content of solids, discoloration, stability, water spotting, ease of removal, gloss, and leveling. The paints that were listed met the requirements for: condition in container, dry-hard time, hiding power, application properties, odor, skinning, flexibility, impact resistance, gloss, yellowing, scrub resistance, and stain removal. Brand names of 15 different classes of tested and approved chemical specialty products were provided, so that the busy hotel purchasing agent could make an effective choice for his own staff. The new 1960 edition of the list has been expanded somewhat and includes a number of hotel textiles, such as towels, sheets, uniforms, window curtain fabrics, and awnings.

The Certified Products List is primarily of interest to institutional buyers, and many recognize its usefulness by ordering a large number of copies. The American Hospital Association, The American Library Association, as well as the Club Managers Association of America, are among groups that have ordered the leaflet in substantial quantities. (Incidentally, a copy of the Certified Products List can be obtained by any institutional consumer for 25c on application to the American Hotel Association, 221 W. 57 St., New York 19.)

It should be noted that the efforts of the American Hotel Association to provide its members with practical information about the performance of certain products have not been hailed with enthusiasm in certain quarters. The Chemical Specialties Manufacturers Association has gone on record as being opposed to product certification procedures. The arguments advanced by the CSMA are that since any member of the CSMA produces dependable products and the responsibility of such companies is unquestionable, such certification is unnecessary. The CSMA also takes the position that such certification does not insure the delivery of the product as certified and that the costs of making tests for certification increase the price that the purchaser must pay. The CSMA further alleges that the specifications are set low enough in quality to permit a considerable number of competing products to qualify,

and that the better quality producers often suffer from competition of products that are not up to the quality level of the better makers.

This position is quite familiar to Consumers' Research and others who have worked over the last 20 or 30 years to encourage the formulation and publication of standards for many different products used by consumers. Manufacturers do not wish to be held to any kind of yardstick of performance, and want to be able to change the formulation of a product at will. In the field of detergents, particularly, changes are frequent and confusing. The consumer has no way of knowing whether the detergent she has just purchased has essentially the same composition and will perform as well as that in the package she has been purchasing under the same brand name and has found satisfactory for some months past.

From time to time, Consumers' Research receives letters from manufacturers who complain that their product which CR tested—and it is always one that has not received an *A-Recommended* rating—was from old stock, has not been made for a number of months, or that it was purchased from a store that has a slow turnover. We have taken the position for many years that it is the manufacturer's responsibility to identify a product clearly and forthrightly so that the consumer may be given appropriate notice of a change in its composition. Manufacturers of some appliances handle this problem by a change in the model number. The purchaser of the many household specialties in the detergent, cleaning, and polishing field, however, has no such protection, and the product sold under a given name may be good at one time, poor at another.

The changing character of commercial products has been taken into account by the American Hotel Association by requiring a biennial test of a product; the modest fee for this retesting is to be paid by the manufacturer. The procedure calls for the products to be submitted to a designated testing laboratory and examined by suitable physical and chemical tests, at a cost of $35 to $125, depending on the product. Those which meet the standard and specification of the A.H.A. qualify for listing. (Names of the products which fail to qualify are not divulged to anyone but the manufacturer.) It may be noted in passing that the laboratory has reported that a significant number of products fail to meet requirements. Manufacturers with products that qualified in the 1959 listing who are able to certify that there have been no changes in formulation are listed, without charge, in the 1960 Certified Products List. As Mr. Fassett noted, in a speech to a trade association, the fee is unquestionably small compared to the cost of advertising and sales literature that might be needed to convince a hotel purchasing agent of the value of a particular product.

Consumers who are interested in obtaining the names of the various products in the A.H.A.'s Certified Products List may want to ask their library to send 25c for a copy. (The types of products included are abrasive cleaners, bowl cleaners, carpet and rug cleaners, dishwashing compounds, floor cleaners, floor polishes, furniture polishes, general-purpose cleaners, glass cleaners, metal polishes, mothproofing compounds, paints, porcelain cleaners, silver polishes, and upholstery cleaners.) The A.H.A. does not make a practice of supplying this Certified Products List to individuals, but is glad to cooperate with libraries, schools, and universities, which have facilities for making it available to a large clientele.

The American Hotel Association carrying on this work under the able directorship of Mr. J. S. Fassett, Director of Membership Services Department, is to be congratulated on this forward-looking program in working out and formulating the standards of performance in so many fields and in implementing such a program by practical tests to make the names of products that qualify available for its members and other institutional consumers.

When you write to CR

Consumers' Research has reported on many topics and tested thousands of products during its 30 years of work for consumers. Readers interested in locating information about a particular subject or test in past issues of the BULLETIN should send a stamped, return-addressed envelope for the reference. Those who wish a particular BULLETIN or tear sheets of appropriate articles on a subject should send 50 cents (stamps acceptable).

We request those who wish special advice to write at least two weeks in advance of the time an answer is needed and to remit with their inquiry a check or money order for not less than $2, in token of the fact that the information is of sufficient importance and value to them to justify the time spent by our staff in providing it. Letters cannot always be answered promptly, since the carrying out of tests and preparation of new material for the BULLETINS must necessarily take precedence over special inquiries from our readers. While readers' requests for information accompanied by remittances will be answered as fully as possible, it should be noted that Consumers' Research receives more letters inquiring about products than can possibly be answered with the degree of completeness and detail we should like to provide, and it may be 10 days to several weeks before a reply can go forward, if the problem is not a simple one.

Correspondence on subscription matters should be written on a separate sheet from letters on other topics, since subscriptions are handled in a different department.

Phonograph Records

BY WALTER F. GRUENINGER

Please Note: Stereo records are indicated by the symbol Ⓢ. Ratings (AA, A, B, etc.) apply first to the quality of interpretation, second to the fidelity of the recording. Most performances are available on stereo and regular LP records.

Ⓢ**Gershwin:** *Rhapsody in Blue,* Columbia Symphony under Bernstein, and *An American in Paris,* N. Y. Philharmonic under Bernstein. Columbia MS 6091. $5.98. Two popular Gershwin extended pieces played with understanding and with taste. In the *Rhapsody,* Bernstein plays the solo part in a staccato style that reveals feeling for the music, but lacks the ultimate technical skill of many *full-time pianists.* Aside from this criticism, the performance is highly recommended. Spacious, pleasing recording. A AA

Ⓢ**Handel:** *Twelve Organ Concerti (Op. 4* and *Opus 7).* Karl Richter (organ) with Chamber Orchestra. 6 sides, London CSA 2302. $14.94. An abundance of distinguished music. Richter equals the best of the competition in performance and in recording which is round and full but with just a bit too much edge to the strings. AA AA

Offenbach: *Tales of Hoffmann* (highlights) & **Humperdinck:** *Hänsel and Gretel* (highlights). Berlin Municipal Opera Company under Wolfgang Martin. Telefunken TC 8028. $1.98. For a low-priced record, this ranks well above average. The music is light and tuneful, the performance does credit to any but the greatest opera houses . . .and chances are *they* haven't always equalled it! Unfortunately, no synopsis of the operas is provided. Sung in German. Clear, wide-range sound. At times, the orchestra seems a little too far away from the singers. A A

A Concert by the Vienna Choir Boys under Kühbacher. Epic LC 3648. $4.98. A world-famous group of lads sing Schubert, Schumann, Reger, Werner, and others with polish and nuance. Good mono recording. . .but this material is a natural for stereo. AA A

Ⓢ*C'mon Let's Dance!* Freddy Martin and His Orchestra. Capitol ST 1269. $4.98. A total of 40 songs for dancing parties, mostly show tunes that have become standards. Play it softly for a lively background, let it rip for the party! Interesting arrangements with lots of violins and saxaphones. Well enough recorded though the violins don't soar into the higher audio atmosphere. Wide channel separation. AA A

Ⓢ*Dinah, Yes Indeed.* Dinah Shore (vocalist). Capitol ST 1247. $4.98. Principally standard ballads nearly everyone enjoys. Sung with feeling and warmth, reaching a new high for this lady who has already set herself far above her competition. Nelson Riddle and his men create a perfect background, playing Riddle's own original, tasteful arrangements. Top-notch recording. AA AA

Ⓢ*Ella Fitzgerald Sings the George and Ira Gershwin Song Book.* Vol. 1 (singer). Verve MGVS 6077. $5.98. This is the way Gershwin should be sung! What a magnificent, understanding artist is Ella Fitzgerald. Rich voice, clear articulation, pleasant swing. And the Riddle arrangements and accompanying band are as good as you can imagine. So is the recording. Included on this disk are "Oh Lady Be Good," "Nice Work If You Can Get It," "How Long Has This Been Going On," "Just Another Rhumba," and others. Five volumes are available. . .and if you are a Gershwin fan you'll want to investigate all of them. AA AA

Ein Prosit. Vierlinger Brass Orchestra with Chorus. London TW 91189. $4.98. Twenty-seven songs ranging from "Ein Prosit der Gemütlichkeit" to "Wir kommen alle in den Himmel," and "Waldeslust." Imagine yourself at a gay Bierstube party of half a dozen couples. Someone has recorded the singing at your table. This is it! Its joy is infectious. . . . In the same vein, though more formal, is *Student Drinking Songs* on London TW 91191. A A

Ⓢ*Fastes et Divertissements de Versailles, Vol. II.* French singers and instrumentalists. Epic LC 3515. $5.98. Elegant, light, gay, and sad music heard at Versailles in the 17th and 18th centuries. The composers include Boesset, du Mont, Marchand, Bernier, Lefèvre. For the most part, vocal solos and duets backed up by a chamber orchestra. Obviously the performers know the style and they have adequate technical facility. Acceptable recording, though the sound is often dry. A A

Ⓢ*Folklore of the South.* Los Machucambos. London SW 99002. $4.98. Sorrowful and joyful songs from Mexico to the Argentine, expertly played and sung by one female, two males, and guitars. Spacious recording with wide stereo separation. AA AA

Ⓢ*Gods and Demons of Bolivia.* "The Morning Stars." Vanguard VRS 9050. $4.98. A panorama of Bolivian folk music presented by singers accompanied by guitar, charango, zampona, kena and bombos. Very professional—the group has been appearing on radio and television. The music is alternately dramatic, lyric, lively, sad, passionate as you'd expect. It's a unique disk. Well recorded in Mexico. AA AA

Ⓢ*"La Voce D'Italia."* Di Stefano (tenor). London OS 25065. $5.98. Mostly songs of Naples sung by one of the most popular Italian tenors of the day. Though his voice is well recorded, the violins of the orchestra sound piercing. AA A

Ⓢ*Music of Heinrich Schütz.* Soloists and Instrumentalists under Robert Craft. Columbia MS 6088. $5.98. Eight pieces of vocal music composed before Bach, with varied, unusual instrumental background—bass with four trombones, for example. Since the style is alien to the performing group from Los Angeles, Schütz does not always get his due. The recording is harsher than it should be. But the disk still fascinates me. A A

Ⓢ*Piano Quartets.* The Festival Quartet. 4 sides, RCA Victor LSC 6068. $11.96. Included are Brahms—C Minor, Beethoven—E Flat, Schumann—E Flat. None of these will really impress dyed-in-the-wool chamber music players, but if they strike a responsive chord in you, buy them, for they are not often recorded. The playing is exemplary, but the balance of the recording works against the first violin, Szymon Goldberg. His companions are Primrose, Graudan, Babin. AA A

Ⓢ*Renata Tebaldi Sings Verdi* (soprano). London OS 25082. $3.98. Extracts from recordings of the complete "Il Trovatore," "La Forza del Destino," and "Otello." Miss Tebaldi possesses one of the most ravishing voices of our time. It is a boon to have these arias on one disk. Variable recording. AA A

Ⓢ*The Hits of the Twenties.* Max Bygreaves (singer) with Ted Heath and His Music. London PS 175. $4.98. Nostalgic album including "Jealous," "Cecilia," "Rose of Washington Square," "When My Baby Smiles at Me," etc., well sung and backed up with a lively band. Good fun. Very well recorded. AA AA

Ⓢ*The Young Schumann.* Leonard Pennario (piano). 4 sides, Capitol SPBR 8480. $11.96. Included are "Carnaval," "Scenes from Childhood," "Sonata in F Sharp Minor," "Papillons." Supple, technically sure, appealing performances. The best, though, demands more *brio,* and warmth in some passages. Very well recorded. A AA

Ⓢ*Vienna Philharmonic Festival under von Karajan.* 4 sides, RCA Victor LDS 6407. $25.98. Attractive music, performance, packaging. Included are the Mozart's Symphony No. 40, Haydn's Symphony No. 104, Beethoven's Symphony No. 7, Brahms' Symphony No. 1, and a disk of *The Vienna of Johann Strauss.* Here we have von Karajan with his regular Vienna orchestra playing the music of Vienna. There are few controversial points of interpretation in the symphonies, and none in the Strauss disk, which is pure gold. Spacious, wide-range recording. An outstanding set. AA AA

Ratings of Current Motion Pictures

THIS SECTION aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 18 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Boxoffice, Cue, Daily News (N. Y.), *The Exhibitor, Films in Review, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings* by the Protestant Motion Picture Council, *The Tablet, Time, Variety* (weekly).

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Anseo, Eastman, Technicolor, Trucolor, Warner Color, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
2	3	—	**Alamo, The**	*hist-dr-c AYC*
—	3	1	**Amazing Transparent Man, The**	*sci-dr AY*
—	3	—	**American in Salzburg, An (German)**	*war-com-c AY*
1	7	2	**Anatomy of Love, The (Italian)**	*com AY*
—	2	1	**Angry Red Planet, The**	*sci-c A*
1	7	3	**Aren't We Wonderful (German)**	*dr AY*
—	2	3	**Atomic Submarine**	*war-dr AY*
—	1	2	**Attack of the Jungle Women**	*doc-dr-c A*
1	2	1	**Babette Goes to War (French)**	*com AY*
—	6	3	**Back to the Wall (French)**	*cri-mel A*
—	1	2	**Battle Flame**	*war-dr A*
—	9	2	**Battle of the Coral Sea, The**	*war-dr AY*
—	—	3	**Beast from a Haunted Cave**	*cri-mel A*
—	2	2	**Beasts of Marseilles, The (British)**	*war-mys-mel AY*
—	—	3	**Beatniks, The**	*soc-mel A*
—	2	1	**Because They're Young**	*nov AY*
—	—	3	**Behemoth, Sea Monster (British)**	*sci AY*
—	8	3	**Behind the Great Wall**	*trav-c AY*
1	8	7	**Beloved Infidel**	*biog-c A*
8	5	1	**Ben-Hur**	*hist-dr-c AYC*
1	6	11	**Best of Everything, The**	*dr-c A*
—	2	2	**Big Night, The**	*cri-dr AY*
2	4	4	**Black Orpheus (French)**	*dr-c A*
—	2	8	**Blood and Steel**	*war-dr AYC*
—	—	3	**Bloody Brood, The (Canadian)**	*cri-mel A*
—	3	—	**Bluebeard's Ten Honeymoons**	*com A*
—	3	2	**Bobbikins (British)**	*com AYC*
—	3	—	**Boy Who Owned a Melephant**	*com-c AYC*
—	3	5	**Bramble Bush, The**	*dr-c A*
1	5	4	**Bridal Path, The (British)**	*com-c A*
1	3	3	**Brink of Life (Swedish)**	*dr A*
—	7	1	**Broth of a Boy (Irish)**	*com AYC*
—	4	5	**Bucket of Blood, A**	*mel A*
—	2	3	**Campbell's Kingdom (British)**	*mel-c AYC*
—	3	—	**Can-Can**	*mus-com-c A*
3	5	7	**Career**	*mel A*
—	1	3	**Carmen Comes Home (Japanese)**	*com A*
—	9	2	**Carry On Sergeant (British)**	*war-com AY*
—	7	6	**Cash McCall**	*dr-c A*
—	4	2	**Chance Meeting (British)**	*cri-mel-c A*
1	3	—	**Cine Ballets de Paris (French)**	*doc-c AY*
—	2	1	**Comanche Station**	*wes-c AY*
—	1	8	**Counterplot**	*mys-mel AY*
—	4	5	**Cousins, The (French)**	*dr A*
—	4	5	**Crimson Kimono, The**	*mys-mel A*
—	1	2	**Crooked Sky, The (British)**	*mys-mel AY*
—	—	3	**Cuban Rebel Girls**	*war-dr A*
—	1	4	**Defend My Love (Italian)**	*dr A*
1	11	—	**Dog of Flanders, A**	*com-c AYC*
—	2	2	**Dog's Best Friend, A**	*cri-mel AYC*
—	2	3	**Drunken Angel (Japanese)**	*dr A*
—	8	3	**Edge of Eternity**	*mel-c AY*
—	4	10	**Five Gates to Hell**	*war-mel A*
—	8	3	**Flying Fontaines, The**	*mel-c AY*
—	6	3	**4D Man**	*sci-mel-c AY*
—	2	5	**Four Fast Guns**	*cri-mel A*
—	7	1	**400 Blows, The (French)**	*soc-dr A*
—	3	—	**Fugitive Kind, The**	*dr A*
—	1	2	**Gangster Story**	*soc-mel A*
—	8	4	**Gazebo, The**	*com A*
1	9	2	**Gene Krupa Story, The**	*mus-biog A*
—	1	3	**Giant Leeches, The**	*sci-mel AY*
—	—	3	**Girl in a Mist, A (Japanese)**	*dr A*
—	2	8	**Girls' Town**	*soc-mel A*
1	5	—	**Golden Fish, The (French)**	*com-c AYC*
—	3	6	**Goliath and the Barbarians (Italian)**	*dr-c A*
—	—	3	**Gunfighters of Abilene**	*wes AY*
—	3	1	**Guns of the Timberland**	*mel AYC*
—	3	14	**Happy Anniversary**	*com A*
—	5	2	**Hatikvah (Israeli)**	*dr-c AY*
—	3	—	**Hell, Heaven or Hoboken (British)**	*war-dr AY*
—	4	2	**Hell Bent for Leather**	*mel-c AY*
—	3	—	**Heller in Pink Tights**	*dr-c A*
—	—	3	**High School Big Shot**	*cri-mel AY*
—	2	4	**Holiday Island (Italian)**	*dr-c A*
1	4	1	**Home from the Hill**	*dr-c A*
—	8	3	**Hound-Dog Man, The**	*mus-dr-c AY*
—	9	4	**House of Intrigue, The (Italian)**	*war-mys-c A*

A	B	C		
—	9	3	House of the Seven Hawks (British)	*mys-mel AY*
—	2	4	Human Condition, The (Japanese)	*soc-dr A*
—	1	3	Hypnotic Eye, The	*cri-mel A*
—	2	8	Inside the Mafia	*cri-mel A*
—	3	5	Ivan the Terrible II (U.S.S.R.)	*hist-dr-c AY*
—	5	6	Jack the Ripper (British)	*cri-mel A*
—	8	1	Jayhawkers, The	*wes-c AY*
—	3	2	Jet Over the Atlantic	*dr AY*
1	11	2	Journey to the Center of the Earth	*sci-c AY*
—	2	1	Kidnapped	*adv-c AYC*
—	3	—	Killers of Kilimanjaro, The	*mel-c AY*
5	8	3	Last Angry Man, The	*dr AYC*
—	4	1	Last Voyage, The	*dr-c AY*
—	1	3	Lesson in Love, A (Swedish)	*dr A*
1	11	1	Libel (British)	*dr AYC*
1	11	6	Li'l Abner	*mus-com-c A*
—	4	—	Living North, The (Swedish)	*doc AYC*
—	3	10	Lovers, The (French)	*dr A*
—	2	1	Malaga	*dr A*
—	2	1	Man on a String	*dr AY*
—	—	3	Man Who Died Twice	*cri-mel AY*
—	2	1	Man Who Wagged His Tail, The	*fan AY*
2	7	—	Masters of the Congo Jungle	*doc-c AYC*
—	3	—	Mating Urge, The	*doc-c A*
—	3	2	Men Who Tread on the Dragon's Trail, The (Japanese)	*war-dr A*
—	7	9	Miracle, The	*dr-c AY*
—	2	1	Mischief Makers, The (French)	*dr A*
—	—	3	Monster of Piedras Blancas, The	*sci-mel AY*
—	10	5	Mouse that Roared, The (British)	*com-c AY*
—	—	3	Mugger, The	*cri-mel A*
—	8	3	Mummy, The (British)	*sci-mel-c AY*
—	—	3	Naked Venus, The	*dr A*
—	4	7	Never So Few	*war-dr-c A*
—	2	1	No Place to Land	*mel A*
—	8	7	Odds Against Tomorrow	*cri-dr A*
—	—	3	Okefenokee	*mys-mel A*
—	1	2	Oklahoma Territory	*wes AYC*
1	5	4	Once More With Feeling	*com-c A*
1	6	6	1001 Arabian Nights	*car-c AY*
2	10	3	Operation Petticoat	*war-com-c A*
2	7	4	Our Man in Havana (British)	*nov A*
—	3	2	Paris Hotel (French)	*com-c A*
—	—	3	Pay or Die	*mel A*
—	3	1	Poacher's Daughter, The (Irish)	*com AYC*
—	3	—	Portrait in Black	*dr-c A*
—	2	4	Pretty Boy Floyd	*cri-dr A*
—	—	3	Private Lives of Adam and Eve, The	*com A*
—	1	2	Proper Time, The	*soc-dr A*
—	5	3	Purple Gang, The	*cri-dr A*
—	2	4	Pusher, The	*cri-mel A*
—	3	—	Raymie	*dr A*
—	1	2	Rebel Breed	*soc-mel A*
—	3	—	Rhapsody of Steel	*doc-c AYC*
—	6	3	Rise and Fall of Legs Diamond, The	*cri-mel A*
—	2	7	Rookie, The	*war-com AY*
—	6	4	Rosemary (German)	*soc-dr A*
—	2	1	Rough and the Smooth, The (British)	*dr A*
—	3	2	Sans Famille (French)	*dr-c A*
—	2	1	Scavengers, The	*mys-mel A*
—	6	1	Scent of Mystery	*mel-c A*
—	1	3	Sea Fury	*adv A*
1	4	1	Seven Thieves	*cri-mel A*
—	—	3	Sexpot Goes to College	*com A*
—	—	3	She Was Like a Wild Chrysanthemum (Japanese)	*dr A*
—	3	9	Sign of the Gladiator (Italian)	*hist-dr-c A*
1	5	2	Sink the Bismarck (British)	*war-dr AYC*
—	2	1	Sins of Youth (French)	*dr A*
—	5	1	Snow Queen, The (U.S.S.R.)	*car-c AYC*
1	4	8	Solomon and Sheba	*hist-dr-c A*
2	3	—	South Pacific	*mus-dr-c AY*
—	1	2	Spartacus	*dr-c A*
—	3	2	Speaking of Murder (French)	*cri-dr A*
2	5	7	Story on Page One, The	*dr A*
—	5	5	Subway in the Sky (British)	*mys-mel A*
1	3	9	Suddenly Last Summer	*dr A*
—	2	1	Summer of the 17th Doll	*dr A*
—	7	11	Summer Place, A	*dr-c A*
—	4	3	Surrender—Hell!	*war-dr A*
—	3	4	Tailor's Maid, The (Italian)	*com A*
—	6	4	Take a Giant Step	*soc-dr A*
—	2	1	Tall Story	*com A*
—	3	6	Tamango (French)	*mel-c AY*
—	6	4	Tarzan, the Apeman	*adv-c AY*
—	2	2	T-Bird Gang	*cri-mel AY*
—	4	1	Terror is a Man	*sci-mel A*
3	10	3	Third Man on the Mountain, The	*dr-c AYC*
1	3	1	Third Voice, The	*cri-dr A*
—	5	6	30	*mys-dr AYC*
—	3	6	Thirty-Foot Bride of Candy Rock, The	*sci-com AYC*
—	1	2	This Rebel Breed	*soc-mel A*
—	2	1	Threat, The	*cri-mel A*
—	4	5	Three Murderesses (French-reissue)	*com-c A*
1	9	1	Tiger Bay (British)	*cri-dr A*
—	1	7	Timbuktu	*adv AYC*
—	3	1	To Live (Japanese)	*dr A*
1	3	1	Toby Tyler	*com-c AYC*
—	3	—	Toccata for Toy Trains	*mus-doc-c AYC*
—	2	3	Too Soon to Love	*soc-dr A*
—	6	4	Touch of Larceny, A (British)	*com A*
—	2	1	Tread Softly, Stranger (British)	*mel A*
—	2	1	Trial of Sergeant Rutledge, The	*dr AY*
—	2	1	Unforgiven, The	*mel-c AY*
—	3	3	Vice Raid	*soc-mel A*
—	2	2	Virgin Sacrifice	*adv-c A*
—	3	1	Visit to a Small Planet	*com AY*
—	3	1	Wake Me When It's Over	*war-com-c AY*
—	2	6	Warrior and the Slave Girl, The (Italian)	*dr-c AY*
—	—	3	Wasp Woman, The	*cri-mel A*
—	6	4	Web of Evidence (British)	*mys-mel A*
1	5	3	Who was that Lady?	*com A*
—	2	1	Wife for a Night (Italian)	*dr A*
—	3	1	Wild River, The	*dr-c AY*
—	3	—	Wind Cannot Read, The (British)	*war-dr-c A*
—	2	2	Woman Like Satan, A (French)	*dr-c A*
—	8	4	Wonderful Country, The	*mel-c A*
1	2	1	World of Apu, The (India)	*dr AY*
4	10	3	Wreck of the Mary Deare, The	*mel-c AYC*
—	8	2	Yesterday's Enemy (British)	*war-dr A*
—	—	5	Young Girls Beware (French)	*soc-mel A*
—	2	3	Young Have No Time, The (Danish)	*dr A*

The Consumers' Observation Post

(Continued from page 4)

ECONOMICAL BEEF CUTS such as chuck and round are usually braised or pot roasted for tenderness. Recent studies made by several universities and experiment stations, however, indicate that such cuts as top round and chuck can be successfully broiled or roasted. It is important, when dry heat is used, to cook such meat at low to moderate temperatures of 300 to 350 degrees Fahrenheit. Using a meat thermometer is recommended to avoid overcooking the beef and causing it to lose juiciness. The researchers noted that a roast cooked to an internal temperature of 160 degrees, medium well done, would be juicier than one cooked to a higher temperature. For well-done beef, temperatures of 176 to 185 degrees might be reached without causing dryness.

* * *

INSURANCE RATE DISCOUNTS on the compact U.S. cars and the small imported models are now being offered by several big insurance companies. Some, such as State Farm Mutual Automobile Insurance Co. and Sears' Allstate Insurance Co., offer discounts on insurance for liability or property damage to persons other than the policyholder, as well as on insurance for damage to the policyholder's own car. Nationwide Mutual Insurance Co. quotes a discount on liability coverage only.

* * *

CONTROL OF CRABGRASS IN A LAWN is something that most suburbanites and exurbanites have just given up. The job of digging out the pest by hand is backbreaking and unrewarding, and chemical sprays are expensive and ineffective. It is reported by The Wall Street Journal, however, that agricultural science is coming to the rescue, with new types of what are called pre-emergence crabgrass killers that are to be applied in the fall or spring before the grass gets a start. There are about 15 firms selling this type of application, most of which are either based on the use of an arsenic compound or chlordane as the essential ingredient. Two of the best-known brands are Pre-Kill put out by Vaughan's Seed Co., of Chicago, and Pax, from The Pax Co., Salt Lake City, Utah. The treatment is not cheap, and chlordane and arsenic compounds are, of course, poisonous. Enough Pre-Kill to treat 2500 square feet of lawn will cost the purchaser $9.95, according to an estimate by the president of Vaughan's Seed Co. After struggling with the problem for a good many years, we remain skeptical, but we shall be glad to hear from subscribers who may decide to try the new treatment.

We can't help you buy this kind of stuff . . .

BUT . . . . .

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AND don't forget the big ANNUAL BULLETIN, a 224-page consumer's encyclopedia that will be off the press in September.

The prices are moderate, as you can see (turn, please).

MILK CONTAMINATED with residues of penicillin and DDT is currently plaguing the Federal Food and Drug Administration. It appears that some farmers have been violating the regulation that, when cows are treated with the antibiotic for mastitis, the milk must not be sold for human consumption for three days. Whether the DDT residues come from injudicious use of DDT as a fly spray or its presence on forage is not known. One survey of 16 cities indicated that milk in 10 of the cities was contaminated with DDT residues, although only 3 percent of the milk in these cases was affected. There is also a problem of contamination with strontium-90. It is becoming apparent that there may be a number of things wrong with "the nearly perfect food."

* * *

THE CURRENT FASHION OF ACQUIRING A SUNTAN in as short a time as possible is a matter of growing concern to medical men. Dermatologists at a meeting of the American Medical Association last year warned that an increasing number of people are risking not only painful and dangerous sunburn, but also the possibility of premature aging of the skin and even skin cancer. There was a time when exposure of the skin to the sun was considered important to prevent rickets, but with the general improvement in the diversity of the American diet this disease has practically disappeared. Dr. John M. Knox of Houston reported that Texans have the highest incidence of skin cancer in the population of any state. He noted that blondes and redheads were especially susceptible to sunburn, and blondes show their age more than brunettes, particularly because of the aging effect of sunlight on their skin. He recommended that blondes use a preparation containing what he called a "shutout" sun screen, such as a benzophenone, which helps to prevent burn and tan as well.

* * *

PICNIC TIME IS AT HAND, when salads and sandwiches are standard fare. The trouble is that these foods tend to spoil easily if they are not properly handled and they may cause inconvenient, even serious, illness. In a study made by three researchers at the New York State Agricultural College, it was found that salad mixed with a generous amount of mayonnaise and with pickle tended to have a lower bacteria count. Salad materials such as potatoes and meat (turkey or chicken) marinated with French dressing immediately after they had been cut up for use also showed a lower bacteria count than untreated ingredients. As for sandwiches, the researchers found that almost all fillings examined were conducive to bacterial growth, particularly those containing meat and egg. In general, the conclusion drawn from the study was that for safest eating, salad mixtures and protein-base sandwich fillings, particularly eggs, should be put under refrigeration promptly and kept there, and given final preparation just before serving.

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An inexpensive electric coffee grinder

DESPITE the rapid rise to popularity of instant coffee, there are a great many Americans who prefer to make coffee from the freshly ground bean. As CONSUMER BULLETIN has pointed out, if the consumer can buy roasted coffee beans from a store which has a fast turnover, he will get freshness, flavor quality, and economy in whole-bean coffee blends.

Unfortunately, the old-fashioned hand-operated coffee grinder, though picturesque, is rarely used for grinding nowadays, for it is a bother to use. The modern homemaker is likely to prefer an electric-powered coffee mill. Some motor-operated mills are relatively inexpensive. One is priced at only $5.

One of the least costly ones found by Consumers' Research is the *Mistral*, a French import, which sells at $6.95. This useful little device is 7 inches high, and weighs only 1½ pounds. It plugs into any standard 110-120 volt outlet. Its push-button switch is easy to operate. In a way, the device permits the user to choose the grind he likes. If a fairly coarse grind is wanted, the coffee is simply ground for a short period of time; for a finer grind, it is ground for a longer time. The user can tell when the coffee is getting to be finely ground because the motor tends to slow down and the character of the noise changes. While this seems like a fairly crude method, in use it was found to be satisfactory.

The coffee, when ground, can be poured out of the hopper, or taken out with a teaspoon. Emptying the coffee out completely is not easy because some coffee tends to remain under the blade. Nevertheless, a turn of the blade and a quick shake of the *Mistral*, upside down, does the job (the plug should be removed from its socket, of course). The plastic cover is easily washed, the hopper easily cleaned with a damp cloth. (The appliance should not, of course, be immersed in water.)

One problem is in putting in the right amount of beans for the quantity of ground coffee wanted. The hopper is marked for 2, 4, and 6 cups, but these marks are only approximate. Consequently, the housewife is likely to find herself with somewhat more or less ground coffee than she wants for a given number of cups of coffee, but the trial-and-error method may solve this problem.

The housewife will not necessarily confine the use of the *Mistral* to grinding coffee. She can also use it for grinding nuts, a job so tedious it sometimes deters the homemaker from making such delicacies as Swedish lace cookies, Vanille Kipferln, and Linzer Torte. The *Mistral* ground blanched almonds quickly, easily, and without making them too oily for use in the cookies and torte mentioned. Indeed, some cooks may well feel it worth the price for this purpose alone.

Although the *Mistral* passed successfully Consumers' Research's tests for high voltage breakdown and leakage current, an examination brought to light some deficiencies that should be corrected. (The *Mistral* is not listed by U.L.)

The grinder was considered a worth-while purchase for anyone who wants to grind moderate amounts of coffee at home. Such a person is not likely to mind the little inconveniences mentioned.

The device could be quite hazardous for a young child and should therefore be stored where little fingers can never obtain access to it (both mechanical and electrical hazards are a possibility, in the hands of a child).

"If, instead of grinding the coffee at the store, you take it home in the bean and grind it as you use it, you would still further prevent staleness from robbing that last half pound of coffee of some of the good flavor it had when it tumbled from the roaster to the cooling pan at the plant. . . ."

James Driver in Consumer Bulletin, August 1958

B. Intermediate

Mistral Electric Coffee Grinder (French maker unknown; sold by Bloomingdale's, Lexington Ave. at 59 St., N.Y.C.) $6.95. Weight, 1½ lb.; height, 7 in. Grinds enough coffee for 1 to 6 cups in a few seconds. Also proved useful in grinding nuts for cookies. Carried 1-yr. guarantee against faulty workmanship. (A faulty grinder is to be returned to Bloomingdale's with sales slip for adjustment.)

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